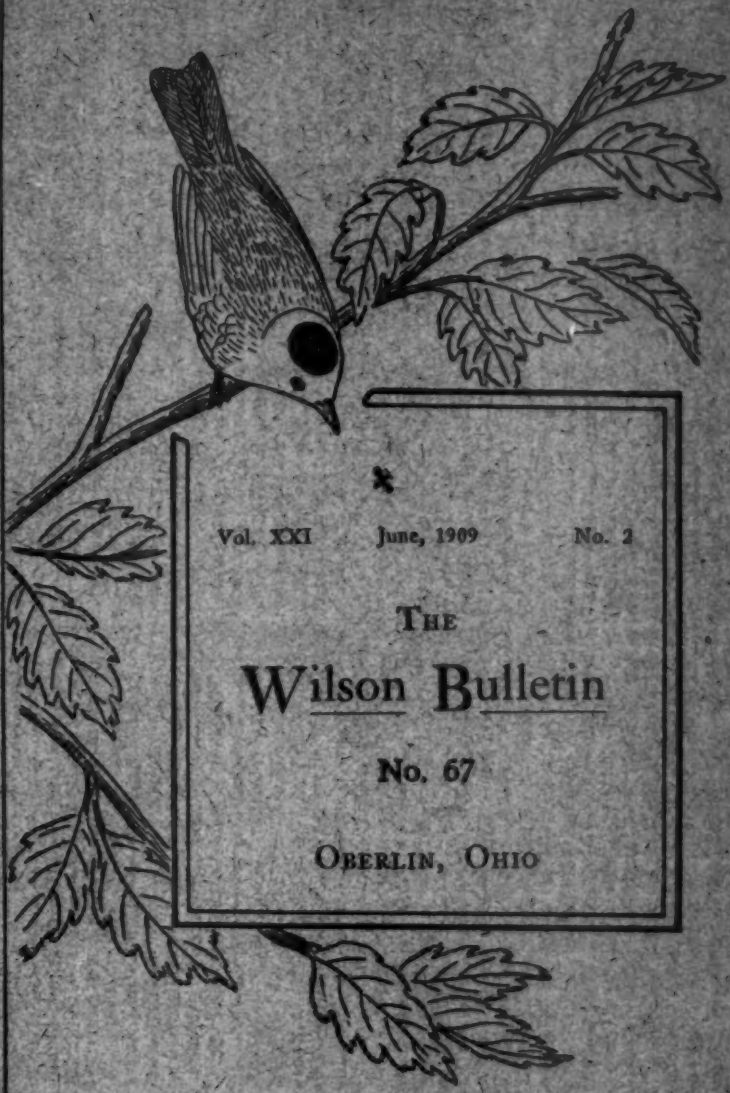


Vol. XXI June, 1909 No. 2

The Wilson Bulletin

No. 67

Oberlin, Ohio

WILSON ORNITHOLOGICAL CLUB

AUG 6 190

CONTENTS.

Birds of Cedar Point and Vicinity. Lynds Jones. 55

The Falcones of North America. Rev. W. F. Henninger and Lynds Jones. 77

Some Washington Bird Notes. Dr. R. W. Shufeldt. 95

Rough-legged Hawk Notes. W. E. Saunders. 97

Spring Migration in Middle Western Ohio. W. F. Henninger. 99

Abnormal Coloration of the Scaup Duck. W. F. Henninger. 102

Audubon Correspondence. Frank L. Burns. 103

Nidification of the Worm-eating Warbler. Frank L. Burns. 104

Editorial. 106

Field Notes—

Baird's Sandpiper; The Dickcissel, J. Claire Wood, 107. The Rough-Winged Swallow and Blue-Gray Gnatcatcher Breeding in Michigan, J. Claire Wood. 108

Members of the Wilson Ornithological Club. 110

THE WILSON BULLETIN

is mailed on the fifteenth of March, June, September and December, by the Wilson Ornithological Club at Oberlin, Ohio, edited by Lynds Jones.

Subscription: One Dollar a year, including postage, *strictly in advance*. Single numbers, 30 cents, unless they are "Special" numbers, when a special price is fixed. The BULLETIN, including all "Special" numbers, is free to all paid up members, either Active, Associate, or Honorary, after their election.

Subscriptions may be addressed to the editor, or to Mr. Frank L. Burns, Berwyn, Pa.

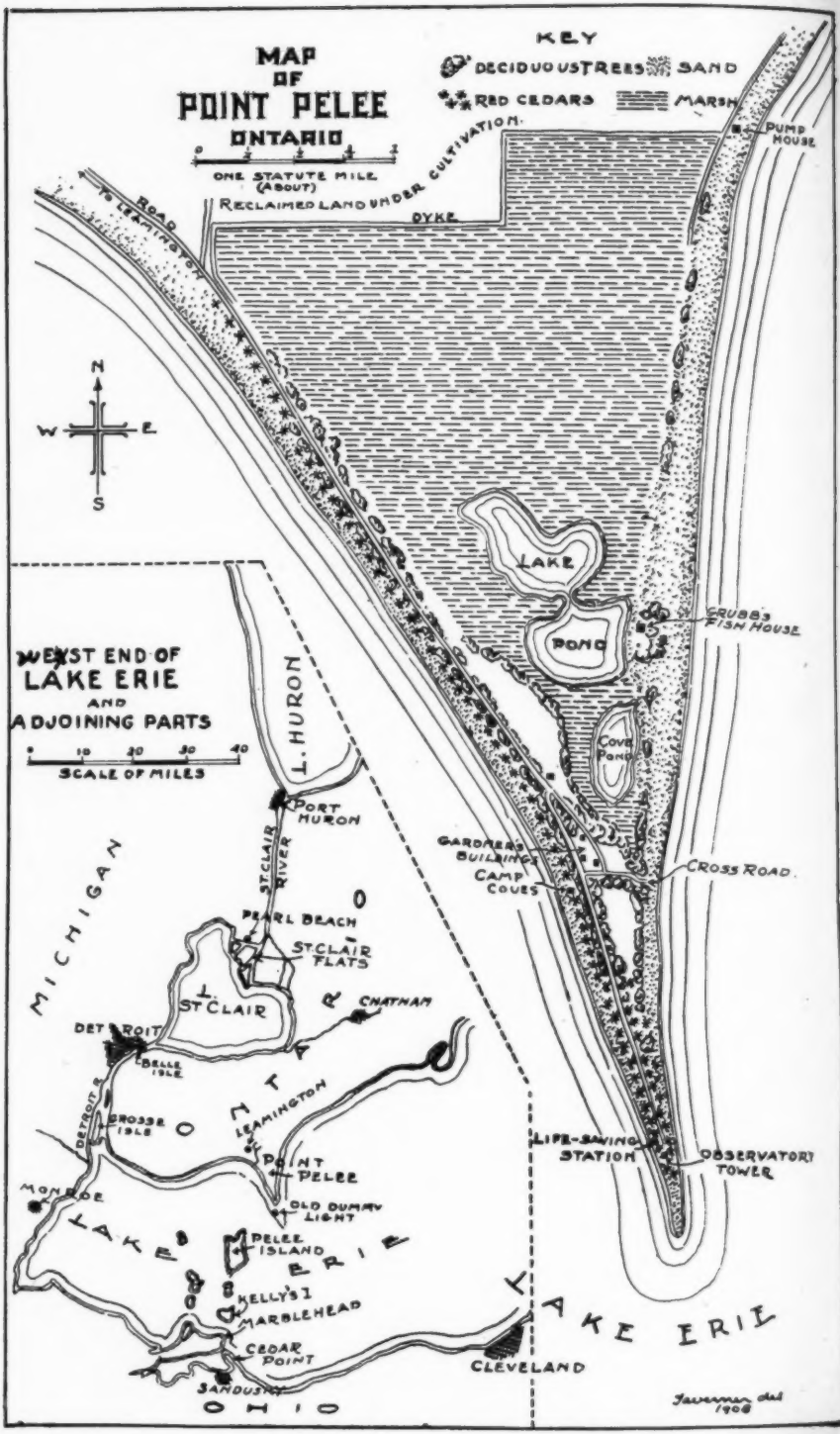
Advertisements should be addressed to THE WILSON BULLETIN, Oberlin, Ohio. Terms will be made known upon application.

All articles and communications intended for publication, and all publications and books for review, should be addressed to Lynds Jones, Oberlin, Ohio.

Articles of general interest relating to bird life are solicited. They should be in the hands of the editor not later than the fifteenth of the month preceding publication.

Entered as second-class mail matter at the Postoffice at Oberlin, Ohio.

AUG 6 190


MAP
OF
POINT PELEE
ONTARIO
ONE STATUTE MILE (ABOUT)
KEY
DECIDUOUS TREES
SAND
RED CEDARS
MARSH
RECLAIMED LAND UNDER CULTIVATION
DYKE
ROAD TO LEAMINGTON
PUMP HOUSE
N
W
E
S
LAKE
POND
GRUBB'S FISH HOUSE
WEST END OF
LAKE ERIE
AND
ADJOINING PARTS
SCALE OF MILES
L. HURON
PORT HURON
ST CLAIR RIVER
COVE POND
GARDNERS BUILDINGS
CAMP COVES
CROSS ROAD
MICHIGAN
PEARL BEACH
ST CLAIR FLATS
L. ST CLAIR
CHATHAM
DETROIT
BELLE ISLE
DETROIT R.
GROSSE ISLE
ONT
LEAMINGTON
POINT PELEE
LIFE-SAVING STATION
OBSERVATORY TOWER
MONROE
OLD DUMMY LIGHT
LAKE
PELEE ISLAND
ERIE
KELLY'S I
MARBLEHEAD
CEDAR POINT
SANDUSKY
CLEVELAND
LAKE ERIE
OHIO
Jaeger del
1908

THE
WILSON BULLETIN
NO. 67.
A QUARTERLY JOURNAL OF ORNITHOLOGY

VOL. XXI JUNE, 1909. NO. 2

OLD SERIES VOL. XXI. NEW SERIES VOL. XVI.

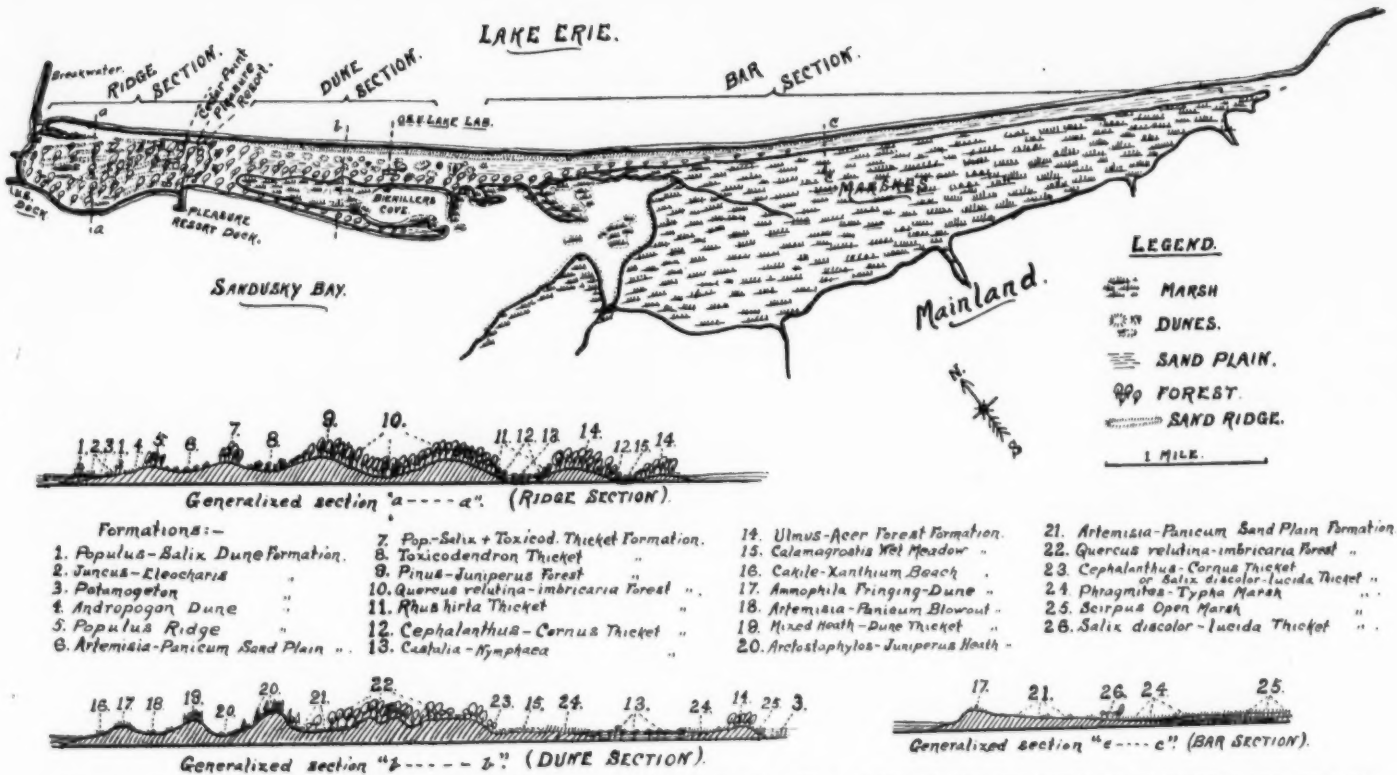
THE BIRDS OF CEDAR POINT AND VICINITY.

BY LYNDS JONES.

The place referred to is Cedar Point, Erie county, Ohio. It lies at the west end of a long sand spit which forms the eastern barrier protecting the entrance to Sandusky harbor. The name "Cedar Point" as here used is intended to cover the whole of the seven miles of sand spit, which begins at Rye Beach, some two miles west of Huron, and not merely that portion of it which is occupied by the summer resort grounds.

The territory which is covered by this list includes the topographical quadrangles of Oberlin, Vermilion, Sandusky, and Put-in-Bay and the adjacent islands of Pelee, Hen and Chickens, East Sister, and Middle. Standing at Cedar Point its 'Vicinity' as here used may appear too extensive and much too scattered, but from the standpoint of a study of bird movements this vicinity becomes of vital importance not merely to bring in comparisons with other localities which are topographically very unlike the beach and its accompanying swamps, but more to show the direction of these bird movements.

The beginning of the work upon which this list is based dates back to the autumn of 1890, when the writer began his residence in Oberlin. Previous to this time there had been some good but somewhat scattered work done by Messrs.



Formations:—

1. Populus-Salix Dune Formation.
2. Juncus-Eleocharis "
3. Potamogeton "
4. Andropogon Dune "
5. Populus Ridge "
6. Artemisia-Panicum Sand Plain "
7. Pop.-Salix + Toxicod. Thicket Formation.
8. Toxicodendron Thicket "
9. Pinus-Juniperus Forest "
10. Quercus velutina-imbricaria Forest "
11. Rhus hirta Thicket "
12. Cephalanthus-Cornus Thicket "
13. Cattalia-Nymphaea "
14. Ulmus-Acer Forest Formation.
15. Calamagrostis Wet Meadow "
16. Cakile-Xanthium Beach "
17. Ammophila Fringing-Dune "
18. Artemisia-Panicum Blowout "
19. Mixed Heath-Dune Thicket "
20. Arctostaphylos-Juniperus Heath "
21. Artemisia-Panicum Sand Plain Formation
22. Quercus velutina-imbricaria Forest "
23. Cephalanthus-Cornus Thicket or Salix discolor-lucida Thicket "
24. Phragmites-Typha Marsh "
25. Scirpus Open Marsh "
26. Salix discolor-lucida Thicket "

Fig. 1. Generalized ecological map and transect of Cedar Point. The width of the peninsula is relatively exaggerated to better show the vegetational features, and the finer topographic features are only approximately correct. For more accurate details of topography see Moseley's contribution and the U. S. Geological Survey Topographic Map. (Drawn by Otto Jennings.)

L. M. McCormick and George D. Wilder, mostly in the Oberlin quadrangle, and occasional visits to the vicinity of Sandusky had been made by Drs. J. M. Wheaton and F. W. Langdon, but the work done by these latter gentlemen was mostly if not wholly in the Port Clinton marshes. A one day trip was made by the writer to Kelley's, Put-in-Bay, and Green islands on May 28, 1894, and another of similar duration to the same places on May 27, 1901. In company with Rev. W. L. Dawson, August 5 to 9, 1901, was spent among the islands in a rowboat, the purpose being the study of the birds there. On this occasion landings and studies were made on Middle Bass and North Bass, Sugar, Hen and three Chickens, North Harbor, and East Sister. This study was repeated August 24 to 27, 1904. Again from August 26 to Spetember 2, 1905, was spent among the islands, four days of this time being spent on Pelee Island. The next island studies were made in 1908, when a day's visit to Put-in-Bay, and another day's visit to Pelee, the Chickens, and North Harbor, occupied July 11 and 28 respectively. August 17 to 21 were spent on another cruise among the islands, the most of this time being spent on Pelee, and only brief stops on Big and Little Chicken, North Harbor, and the "Rattle" of Rattlesnake. The distinctively Cedar Point work done by the writer has been the whole of July, and part of the last week of June, 1907 and 1908, and studies of from one to four days duration, especially during the winter season and during the migration months. In conducting these studies an effort was made to have them cover all sorts of weather conditions so that they would be representative. The period covered by these studies of the bird life of Cedar Point is eight years, with the stronger emphasis laid upon the work during the last three years. The most extensive studies, covering the longest period have been made in the Oberlin and Vermilion quadrangles.

I have also drawn upon the work of Professors Herbert Osborn, E. L. Rice, and E. L. Mosely and their students, and upon the work of Mr. R. L. Baird, who made special studies of the birds during the summer term at the Lake

Laboratory. The foundation for the list is a card catalogue which has been kindly furnished me by Professor Herbert Osborn, the director of the Lake Laboratory, compiled by himself and by those who have taught with him there during the existence of the Laboratory.

There have been two notable papers relating to the Cedar Point region proper, to which the reader who wishes to learn particulars which cannot be given within the limits of this paper is referred. One is the "Formation of Sandusky Bay and Cedar Point" (here meaning the whole sand spit) by Professor E. L. Mosely, in the Thirteenth Annual Report of the Proceedings of the Ohio State Academy of Science, 1904. From this paper it is made clear that when the lake was at a much lower level than it is at present there was no bay, the Sandusky river flowing into the lake through a narrow channel somewhere lakeward between Marblehead and Cedar Point, and therefore there was no peninsula as now. Cedar Point must have been a ridge of clay, probably underlaid by shale, and the present bay was a depression, but not even a marsh, lying between the higher land now represented by the mainland and this ridge. The changes, or most of them, which have produced the bay and marshes and sand spit have occurred in historic times, being the result of a tilting of the land at the eastern end and consequent deepening of the lake at its western end.

The other paper is "An Ecological Classification of the Vegetation of Cedar Point" (again meaning the whole of the sand spit) by Otto E. Jennings, published in The Ohio Naturalist, Vol. VIII, No. 6, April, 1908, pp. 291-340. To this paper I am indebted for most of the pictures which will accompany this series of articles. The reader who is especially interested in the study of Ecology should not fail to read this exhaustive paper. It is sufficient here to say that bordering the sand spit on the one side are the waters of the lake and on the other, the open waters of the bay, while at its eastern end, for rather more than half of the distance, are the extensive marshes with greater or lesser areas of open water.

The immediate mainland still has remnants of the once dense and heavy forests, alternating with pastures, meadows and plowed fields running to the borders of the marsh. Streams flowing in from the mainland and ridges extending out from the sand spit landward result in numerous coves, some of which are three-quarters surrounded by trees or bushes. Practically the whole extent of the marsh border of the sand spit, down to the water's edge, there is a growth of bushes, mostly willow and button bushes, ranging from a few inches to ten feet high. During the hight of migration these bushes are full of warblers, sparrows, and vireos. Along the narrower reaches of the sand spit, toward its eastern end, cottonwood and willow trees immediately border the marsh fringe of low bushes, only in the wider places being more than straggling individual trees, none of any considerable size. Within the limits of this study many large cottonwood and willow trees which stood on the crest of the ridge have been overturned and washed away at times of high water and the crest of the ridge moved marshward. More of this destructive work has been done near Rye Beach, at the eastern end of the sand spit, than elsewhere. It is clear that here, at least, the lake is pushing the bar back into the marsh at the rate of many feet a year. Along this narrower part of the sand spit wild grape vines abound, and in the fall the abundant supply of ripe grapes calls many birds to the feast. Robins have been found there later than elsewhere in the region under consideration.

As the sand spit widens northwestward large trees, mostly cottonwood, become more numerous just marshward from the crest, with a few clumps of wilows each side of them, then a variable width of grass covered sand, in places reaching a width of more than ten rods, and finally the marsh border of bushes with their fringing smaller trees. Where points of the sand spit reach out into the marsh the bush and tree growth form considerable thickets in which the smaller birds, including the thrushes, woodpeckers, jays and crows, and even the Woodcock and Whippoorwill, find congenial sur-

roundings. Sharp-shinned Hawks are also usually found here, and occasional Crows and Meadowlarks. During the heaviest migrations not only are such places full of all sorts of birds, but they even spill over upon the sand meadows and beach, and fly out into the marsh vegetation. Many strictly wood warblers have often been observed feeding like shore birds near the water's edge on such occasions.

Westward from the mouth of the Black Channel, accompanying the more open waters of the bay proper, the sand spit widens, and for the most part is covered with a more or less dense forest marshward from the crest, with occasional and usually small areas of bare sand or grass covered sand, except in the dune region where the blowouts between the dunes cause many extensive bare sand areas. These forested areas correspond to forested areas of the adjacent mainland, except that the species represented are more numerous, and there are areas of considerable cedar thickets. For a more detailed account of the vegetation the reader is referred to the two papers cited above.

It should be noted that from a width of less than twenty rods at its eastern terminus at Rye Beach the marsh widens and opens westward to its western end where there is open water and a distance of two miles between Cedar Point pleasure resort and the docks of Sandusky, and that the distance westward to Marblehead is considerably farther and across open water. Kelley's Island is plainly visible some seven miles northwestward.

Pelee Island is the largest and most northerly island of the archipelago lying between Sandusky and Point Pelee. Its physical features are strikingly similar to those of the greater part of Point Pelee, but the interior marshes are less extensive now, having been drained and utilized for agricultural purposes. Its southern end closely resembles the southern end of Point Pelee with practically the same vegetation and beach formations. On all of my visits to the island during the autumnal migrations I have found all species of migrating birds ranging southward along or parallel to the east shore

line, none at all along the west side. I regret that no studies have been conducted during the vernal movements.

Middle Island is a verdure covered lime-stone ledge some twenty rods in width by ninety or more rods long, the long axis lying nearly east and west, thus lying directly athwart the south point of Pelee Island, and some four miles distant. There is a border of trees of considerable size and a peach orchard occupies the interior. A light-house stands at its eastern end. The only inhabitants are the light keepers. Here, in late August and early September, warblers of many species were swarming. In 1908 the sand ridge which has been built up at the western end contained many nests of Common Tern. In other years no terns' nests were found here.

Kelley's Island forms the first stepping stone for the northward moving birds, being separated from the headland of Marblehead by a strait of water about three miles wide. Like Put-in-Bay it is a mass of limestone rising out of the lake. Extensive quarrying of the limestone has been in progress for years. There is a fringe of trees everywhere except on the northern exposure, while the western third contains an extensive peach orchard with bordering woods of considerable extent. The highest point of this island is seventy-five feet above the lake level. It is about two miles from Middle Island. This island is a considerable fragment of the mainland, which Mosely says was once clearly a part of the mainland promotory, with probably low or even marshy ground connecting it with Marblehead. Indeed, there are historical accounts of crossing by Indians and others, with only narrow channels to swim.

It would therefore appear that at some time not so far distant these islands were elevated limestone masses of a nearly continuous land barrier connecting Point Pelee with Marblehead. Doubtless also the Bass Island group with the adjacent smaller islands, at the same time were connected with Catawba Island. The Hen and Three Chickens, East Sister and North Harbor seem to form another group of the same nature, with a possible connection with the

Ontario shore through the shoal north of them. Whatever the facts may be it seems clear that at no very ancient date the land masses were much more extensive and much nearer together, and the expanse of water over which the birds must pass to and from the north much less than at present.

I have selected Pelee, Middle, and Kelley's Islands for brief descriptions because they seem to form the most important highway of migration, and because they represent the types of islands forming this archipelago except the gravel islands of Big and Little Chicken, where the Common Terns' nest in great numbers. These small islands are limestone ridges covered with gravel. Big Chicken is an angular island of perhaps two acres extent, with one willow tree (there has been another tree which recently blew down), a mass of gourd vines in the summer, and a small fish house. Little Chicken is a narrow ridge of limestone rock, with outlying ledges of considerable extent on all sides nearly reaching the surface and hence protecting this narrow ridge from storm waves. There are several small willow trees and bushes along the north border, and a dense growth of 'smartweed' each side of the gravel ridge which occupies its center. About a rod in width and fully ten rods in length of this island lies above summer storm waves. Terns' nests are placed as thickly all over this area as it is possible for the birds to sit without serious quarreling.

Put-in-Bay is like Kelley's , but larger and with more woods and fields. It rises to about 69 feet above the lake level at the hotel. Middle Bass is only 11 feet above the lake level, with few trees, but extensive vineyards, and a small pond where King Rails' nests are numerous. North Bass rises twenty-four feet. It has considerable woods and relatively few fields. The related small islands do not present any unusual features.

While North Harbor Island belongs to the type of larger islands it presents some interesting features. It is a limestone ridge trending nearly due north and south, not above ten rods wide by three times that length, covered by a dense growth of deciduous trees, most numerous among which is the hack-

berry, with a few cherry trees and berry bushes. A thick grass grows along the forest margin and even beneath the trees. On every visit there have been large numbers of nests of Common Tern everywhere except in the middle of the forest. On the 1904 trip to this island numbers of large snakes, presumably 'Black' snakes (*Bascanion constrictor*) were found, and the terns' nests were much fewer than on other visits. This island, if any of the group, would be the one best suited for the nesting of the Herring Gulls, but there has never appeared any evidence of the nesting of these birds on the island, nor on any others of the group. It is true that the gulls have been numerous in this region on every visit, but so are they all summer near the south shore of the lake. It is likely that they are not breeding birds.

The mainland region under discussion lies mostly within the basin of Lake Erie when it was at flood. The oldest and southernmost beach lies about 4 miles north of Oberlin, swinging up the Black River valley to within a mile of a line running through Oberlin east and west, and up the Vermilion River valley to Birmingham. The vegetation of the region is typically Carolinian, and differs little from that of the north shore of Lake Erie. The two rivers mentioned, and the Huron River, have worn deep, narrow gorges well into the shale which underlies the whole eastern part of the region, in places capped with sandstone. Westward and Put-in-Bay quadrangles, the outcropping rock is limestone. All of the streams trend in a general north and south direction. The valley of the Sandusky River is clearly the most important one from a migrational standpoint, connecting, as it does with the head waters of the Scioto. I believe that proof will be forthcoming that one of the main "fly lines" across Ohio, for both vernal and autumnal migrations is this Scioto-Sandusky River-Pelee route. It will be necessary to establish several observation stations from the Ohio River to Point Pelee, including each of the islands in the direct line, to conclusively prove it.

My visits to the northerly lying islands indicate that a

rather weak autumnal movement occurs across North Harbor, East Sister, and the Bass group to Catawba, that a strong autumnal movement occurs along the Point Pelee-Marblehead route, and that there is a desultary westward and southward movement from Pelee Island to the Bass group and from there to Catawba. As to the crossing at other places, notably from Point Pelee directly to the Ohio shore, which Taverner and Swales strongly favor for certain species, I have but one bit of evidence, during the seasons of migration. During a southward movement in the middle of August a patrol of the beach from Rye Beach to the Lake Laboratory, a distance of six miles, yielded 12 Red-headed Woodpeckers, 4 Ovenbirds, 3 Red-eye Vireos, and unidentifiable remains of several other small birds washed upon the beach. The most of these were within three miles of the Lake Laboratory. The night had been cloudy and the wind northwest, brisk. If these birds had been crossing by the island route when they perished in the waters the wind would have drifted them to the place where we found them. If they had been crossing to Huron they would have been driven on the beach near Vermilion where we found none washed up.

During the winter I have often seen Snowflakes and Horned Larks coming from the north, and giving clear evidence of having flown far. In every instance they were flying just above the ice, and tumbled rather than alighted upon the sand of the beach, evidently in an exhausted condition. These winter observations cover the whole line of beach from Lorain to Cedar Point.

The only birds I have seen striking out northward across the lake as if to cross, during the vernal migration, have been the Sharp-shinned and Broad-winged Hawks. I have seen many other species start out boldly, some even lost to sight for a short time, others not venturing so far, but all eventually reappearing and finally giving it up.

I have been unable to secure any hearsay evidence of extensive migrations from the north anywhere along the south shore west of Lorain except in line with the islands. At the

Lorain lighthouse there have been night visitations of migrating small birds of many species, but it has not been possible to prove from what direction they came to the light. While it may be true, as Taverner and Swales affirm, that some birds do cross the lake directly from Point Pelee theirs is the only direct evidence of it. Of course it would not be possible for them to see the birds for any considerable portion of the whole distance between the Point and Huron on the opposite shore, where they would presumably fly, so that the birds might turn westward to Pelee Island after passing beyond their vision. I am strongly inclined to think that exactly this does happen with Purple Martins, all of the swallows and most of the blackbirds, for I have seen them coming to the easternmost point of Pelee Island from nearly due east, then pass down the east shore of the island to the extreme south point of sand, thence across to Middle Island, and when we were between Middle and Kelley's and on Kelley's, they were continuing on to Kelley's. Again, when we were sailing midway between Kelley's and Marblehead the migrating birds were passing from Kelley's to Marblehead. During this same period of movement we also sailed out eastward into the open lake but saw no birds passing anywhere, nor were any arriving anywhere along the Ohio shore from Cedar Point to Lorain although there was a steady stream passing over the island route at the same time.

The only occasion when I have been in a position to check up the work of Taverner and Swales at Point Pelee was on September 17, 1906, when they state [1] that there was a migration of Sharp-shinned Hawks passing down the Point and out across the lake for the Ohio shore. On that date there was no evidence of any arrival of Sharp-shins on this side east of Sandusky nor on preceding or subsequent days as far as I could learn. So large a flight would certainly have been noticed if the birds had crossed directly unless, indeed, they rose to great hights and continued so well inland.

In the absence of direct evidence from co-operative work

[1] Wilson Bulletin, Vol. XIX, p. 93

on both sides of the lake and among the islands any discussion of the routes taken by the birds in their southward movements is too academic to be profitable. I hope that in the next few years some fairly extensive and complete work of this kind may be accomplished and the question settled.

The writer is painfully aware of the shortcomings of this list, but he feels sure that it is wiser to publish it now than to wait until comparisons with the list by Taverner and Swales for Point Peelee would lose value by reason of so great discrepancies in the time covered by the work at the two places. This list should be regarded as preliminary.

---

1. *Colymbus auritus.*—Horned Grebe.

An irregular and not often common spring migrant, but usually an abundant fall migrant, when it is found in large companies in the shallow water between the shore and the outer bar on the lake. Relatively few individuals are ever found on the waters of the Bay at any time. Its earliest date of arrival in spring was March 25, the median date being April 16; the median date of departure for seven years is April 21, the latest date being May 17, 1908. The median date of arrival in fall is October 10, the earliest date being September 23, 1907. It usually remains, but in small numbers, until the first severe weather—December 27, 1907. Scattered individuals are found on small inland waters, and on the streams. Occasionally exhausted and starving individuals are found in mid-winter in towns or cities.

When the numbers are so great that large companies are formed there is a perpetual conversational undertone decidedly pleasing in quality, accompanied with a sort of play among the birds. There is usually little concerted action, whether resulting from sudden fright or otherwise, but I have seen a flock of nearly 200 individuals dive almost on the instant.

2. *Podilymbus podiceps.*—Pied-billed Grebe.

A regular and fairly common migrant, but never in such numbers as the last species. A few remain all summer in the marshes and very likely breed there, but I have not yet found birds with their young. At Cedar Point it is just as clearly a bird of the marshes as the last species is of the open lake. Occasionally individuals are seen on the lake side of the sand spit, especially late in the spring migration. The maximum number of individuals forming a company seldom exceeds a dozen, and from two or one to four or five is far

more usual. It is next to impossible to get one of these birds to rise from the water, but they dive on the least pretext, and may remain hidden with only the bill showing for long periods. On the Oberlin Water Works reservoir they often remain for weeks at a time, but seem never to become accustomed to the presence of people on the bank.

The median date of arrival at Oberlin is April 8, the earliest being May 28, 1904. At Cedar Point the median date of arrival is March 19, the earliest being March 16, 1907. They first reach Oberlin about October 1, and the last leave Cedar Point about November 4. At any time during the periods of migration one or two may be found

Fig. 2. The Dune Section, looking southwards from the Lake Laboratory. To the left are the dunes and the blowouts, the lake in the distance. Between the dunes and the bay on the right is the forest strip, here mainly consisting of the *Ulmus-Acer* and *Ailanthus* formations. (Photo by Professor Herbert Osborn.)

on the smallest and most insignificant ponds, where it is an easy matter to make a hand capture, the birds not being able to get under way in flight from so small a water area, and of course unable to escape by diving in a few inches of water.

3. *Gavia immer*.—Loon.

Always scarce, even at Cedar Point, so that migration dates are unreliable. One or two are usually found on the Oberlin Water Works reservoir about the middle of April, remaining from one to

ten days. There was a female there on May 21, 1901. My only fall records are October 22, 1897, and November 4, 1907. This apparent rarity is probably somewhat due to my short and infrequent studies along the lake. But the Loon is scarce at any time of year, and clearly does not breed in Ohio now.

4. *Gavia arctica.*—Black-throated Loon.

The only record of this bird's occurrence within the region is that given by Dr. J. M. Wheaton for Sandusky Bay in the fall of 1880 on the authority of Mr. H. E. Chubb, then of Cleveland, who mounted the specimen.[1]

5. *Uria lomvia.*—Brunnich's Murre.

During the visitation of 1896 four birds of this species were captured at Lorain, three in Sandusky Bay, and others reported from Ottawa county during the last half of December. Professor E. L. Moseley tells me that there were either five or seven in Sandusky Bay in December, 1908, some of which were captured. It appears that the birds do not survive long after reaching the waters of Lake Erie.

6. *Stercorarius pomarinus.*—Pomarine Jæger.

Occurrences of this species are limited to a specimen in the collection of Mr. A. Hengartner, of Lorain, where it was secured, and the one reported in Cook's Birds of Michigan by Professor E. L. Moseley, for Sandusky, October, 1889.

7. *Stercorarius parasiticus.*—Parasitic Jæger.

The records are as follows: Sandusky Bay, September 13 and 20, 1889, and October 6, 1895, E. L. Moseley. Near Sandusky, November, 1895, two specimens taken. F. M. Comstock.[2]

8. *Larus leucopterus.*—Iceland Gull.

One specimen was taken at Lorain, December 22, 1888, and preserved by Mr. L. M. McCormick for the Oberlin College museum. If it occurs with any regularity upon Lake Erie it has thus far passed unnoticed.

9. *Larus argentatus.*—Herring Gull.

In the sense that it is present at all times of year it is a resident if the proviso is added that it does not breed in the region. The birds found in summer are clearly not breeding birds, although some of them are in full adult plumage. During hard winters, when the ice covers the lake extensively, the birds are less numerous and

[1] Geological Survey of Ohio, IV, 1882, p. 565.

[2] The Auk, XIII, p. 171.

are gathered in the vicinity of the cities, or in the regions where fishing through the ice is practiced extensively. Apparently there is always some open water in Sandusky Bay and the marshes, and here I have seen the birds, to the number of fifty, lined up along the the linear openings in the ice which mark a line of decaying swamp vegetation. The gulls appear to spend the night on the ice in the vicinity of such feeding places. After a hard winter there is pretty clearly a northward migration, during which individuals visit the Oberlin Water Works reservoir.

10. *Larus delawarensis.*—Ring-billed Gull.

The presence of this gull all along the lake front has been suspected, but it has not been until the more recent intensive studies at Cedar Point that positive proof of its regular occurrence has been obtained. It is clearly much less common than the Herring Gull. None have been observed in winter, and none during June and July.

11. *Larus philadelphia.*—Bonaparte's Gull.

This is a regular migrant, but is far more numerous during the southward movement than at other times. None have been recorded in July, and almost none in June and August. The migratory movement appears to occur along the river courses and few fly over the regions between. Thus at Oberlin, which lies between the two river courses, only a few scattered individuals are seen, while at Cleveland, and especially at Sandusky, many hundreds pass. In my experience this gull is far more numerous on both sides of Cedar Point sand spit than elsewhere along the lake, and the times of maximum numbers occur between November 1 and December 30. During the last three winters I have found a flock of from 50 to 500 birds ranging along the shores of the sand spit as long as there remained open water, which was well into January. They act much like terns, diving headlong into the water for fish, but can always be readily distinguished from them by the almost sparrow-like conversational notes instead of the harsh *tcr-r-r* of the terns. They seem to prefer the vicinity of the lake beach to the marshes for feeding grounds, possibly because small fish are more numerous there. On the occasions when the pent-up swamp waters at Rye Beach have broken through into the lake carrying all sorts of debris upon their floods, these gulls have collected at the place in great numbers, feeding.

The northward migration begins from the first to the middle of April, and all have passed north by the first of June. A few individuals return by the first of September, but the flood does not appear before the first of November. Professor E. L. Moseley states that over 2,000 of these birds were feeding in the waters and marshes east of Sandusky on November 12, 1904.

12. *Sterna caspia.*—Caspian Tern.

Records of this tern are confined to Sandusky Bay and the west half of the sand spit and adjoining marshes and lake. Two were recorded September 13 and 23, 1907, and one May 4 and 12, 1908. They were feeding in the same places, but somewhat apart from the Common Terns. Their greater size was clearly evident.

13. *Sterna hirundo.*—Common Tern.

Common from about May 1st to about October 1st. The only breeding places thus far discovered are upon Big and Little Chicken Isl-

Fig. 3. The Black Channel and the *Phragmites-Typha* Marsh Formation. The forests in the far distance are at the edge of the main land on the other border of the marsh, more than two miles distant. Near here the Bladpates and Scoup Ducks abound on close days. Black Ducks and Mallards feed in the vegetation covered areas near. (Photo by Otto Jennings.)

ands, and upon the reef of Chick when it is sufficiently uncovered by water, upon North Harbor, Starve Island, the gravel ridge at the west end of Middle, and over the top of the Rattle of Rattlesnake Island. There are old reports of nestings upon Gull Island, which has never been above the wave wash since my studies began. It is pretty clear that the nesting places are greatly restricted since the advent of the white man. Hen Island, which is reported as having

been a favorite nesting place, is now inhabited and no terns nest there. As nearly as can be estimated there are probably 3,000 nesting pairs within this region, and perhaps half as many non-nesting birds which range freely over the region. In the region of Cedar Point there have always been considerable numbers during my studies. In late August and early September there have always been considerable numbers of winter plumaged Black Terns about the nesting islands and mingling among the flying Common Terns, adding their protests against the unwelcome visitors.

14. *Hydrochelidon nigra surinamensis.*—Black Tern.

A variable number of Black Terns breed in the marshes. In favorable summers I have counted upwards of twenty pairs, but there are usually not so many. I therefore can hardly agree that it is a "common" breeder, but it is certainly regular. It selects for a nesting region the somewhat open central parts of a considerable area whose margins are thickly grown up with marsh vegetation so that a boat can be pushed across and into the nesting area with much difficulty. The nest is placed on decaying vegetation which is barely more than flush with the surface of the water, many times, perhaps always, as Mr. W. F. Henninger thinks, upon a submerged muskrat house. I have found fresh eggs during the first week of July. The birds are courageous in the defense of their eggs and young, even striking the head of the intruder. The first birds appear in spring near the first of May, and the last have passed south by September 25 During the migrations they are not infrequently seen along the river courses.

15. *Phalacrocorax auritus.*—Double-crested Cormorant.

Only twice have my visits to Cedar Point coincided with the visitations of this species. On April 29, 1907, I found a specimen which fishermen told me had been shot four or five days previously when there were considerable numbers in the region of Cedar Point. On May 13 I recorded one specimen, and again on November 4, at Cedar Point. If fishermen are reliable there is a regular migration of this species across the region of Sandusky not far from the first of May. Moseley reports one on October 7, 1903.

16. *Pelecanus erythrorhynchos.*—American White Pelican.

There are two records for the immediate vicinity of Oberlin. Specimens were not taken but the records were made by persons who are familiar with the species in other places. One was in early May, 1890, the other at the Oberlin Water Works reservoir in the spring of 1897. I have been unable to secure the exact dates.

17. *Mergus americanus.*—American Merganser.

Present on the lake, except during and in summer, the middle of severe winters. It is simetimes numerous enough to be called common, but ordinarily less than fifty individuals are recorded along ten miles of lake front. Immature and female plumages outnumber full adult male plumages about five to one. The decided preference of this species for the open waters of the lake has often been noted. There are very few records of its occurrence in the waters of the marshes. It seems to prefer to feed near the shore.

18. *Mergus serrator.*—Red-breasted Merganser.

This is the commoner one of the mergansers during both migrations, when hundreds are sometimes recorded in a single day, but it is less sure to remain all winter. It is more often found in the marshes feeding in company with other ducks. My migration records, which are not as complete as one could wish, indicate that it arrives from the south about the middle of March, passes north about the middle of May, returns from the north about the first of November, and departs southward again during the cold weather of January.

19. *Lophodytes cucullatus.*—Hooded Merganser.

Its occurrence in the region warrants the tern "scarce." From one to half a dozen individuals are seen each year, but gunners report it as not uncommon during the hight of its migrations. My records indicate that it moves northward from the last week in March to about the first of May, and south during nearly the whole of November, but migration dates are too few to make this certain. I have found more individuals along the rivers than in the marshes and on the lake.

20. *Anas platyrhynchos.*—Mallard.

Mallards reach the marshes at Sandusky about the first of March, or as soon after that as there is much open water; are common during the most of March, thinning out decidedly with the approach of warm weather, and all but stragglers are gone by the middle of April. Individuals are occasionally seen in June and July, but if any breed there is no other evidence than such irregular occurrence gives. The first migrants appear near the first of October, the numbers increase to common during November and most have gone with the first touch of winter. Occasionally a few remain well into January in mild winters. While this may properly be called one of the common ducks at Cedar Point it is by no means as common as the next species. It is more often put up from the vegetation covered parts of the marsh than from the open waters of it. On gunning

days one looks for it on the lake, but at other times it is seldom seen on the lake.

21. *Anas rubripes.*—Red-legged Black Duck, and *Anas rubripes tristis.*—Black Duck.

Sufficient data is lacking to determine the exact status of the two forms, hence the remarks will apply to the undivided species. It is clear that both forms occur, as proved by specimens examined and preserved.

This is the commonest of the larger ducks, if, indeed, it is not the

Fig. 4. The second cove south of Biemiller's Cove. The *Nymphæa advena* Consocies mingled with the *Castalia tuberosa* Consocies, *Typha* in the immediate background and *Phragmites* further back. A type of the feeding ground of Pied-billed Grebes. Black Ducks and Mallards are often flushed from such situations in the early morning. Coots are also found here, and among the bordering vegetation Florida Gallinules may be found in summer. (Photo by Otto Jennings.)

commonest of all ducks. Gunners report "millions" in the hight of the gunning season. Such an estimate appears less extravagant when one realizes that the birds, almost crazed by the constant rattle of the guns, are flying back and forth and up and down, the same individuals reappearing many times in the course of an hour. I have seen many hundreds in a single day, but I doubt if more than a few

thousands are even present on any day. This species may constitute a third of all the ducks on some days. The Black Ducks flush from their feeding places in the swamp vegetation readily. Indeed, it is next to impossible to stalk them to within gun range. They rest on the open waters of the bay, or well out in the lake, where great flocks often blacken its surface. The first arrive about the first of March and the bulk have gone north by the first of April, but a few generally linger even well into May. The first return about October 15, and the numbers reach a maximum within two weeks. There are almost always considerable numbers present until cold weather in late December or early January closes the marshes. In mild winters a good many remain all winter.

22. *Chaulelasmus streperus.*—Gadwall.

An examination of the bags of the hunters usually results in a few specimens of this fast disappearing duck. It seems to be one of the rarest of the ducks now, but I am told that not more than fifteen years ago it was common. I have no reliable migration dates.

23. *Mareca americana.*—Baldpate.

During the spring migrations of 1907, 1908, and 1909, it was one of the more common species of ducks at the Sandusky marshes, becoming common on the 18th, 16th, and 15th of March respectively, and remaining so until May 6, 1907, and April 2, 1908. Of course it flies out to the lake when hard pressed in the marshes, but the greatest numbers have been found on the larger areas of open water in the marshy regions east of the mouth of Black Channel. One need never be in doubt about the identity of this species when the notes are once learned. To windward of large flocks I have heard the mingled notes of the flock at a distance of nearly a mile. On Mondays, when the Ohio game laws forbid shooting, these ducks gather in companies of hundreds on a certain stretch of open water in the marsh and may there be seen courting, playing and fighting, or tipping up while feeding.

The migrations begin with the second general migration wave—in the second week of March generally—and the bulk are gone north by the middle of April. Individuals and even small flocks may remain as late as May 20 (1907). Fall records are entirely wanting from my books. Almost none of these ducks are found far from the marshes, but when they are I have found them singly or in twos on the small field ponds.

24. *Nettion carolinensis.*—Green-winged Teal.

I have only three records, all of which are for the Oberlin Water Works reservoir, as follows: March 29 and October 16, 1899, one

each time; March 27, 1905, one. Gunners' statements are not satisfactory, but they seem to indicate that this teal is scarce at the marshes. I have not seen specimens taken there. Either the numbers have greatly decreased or this is not one of the fly lines of this species.

25 *Querquedula discors*.—Blue-winged Teal.

Judging from actual records only a few pairs breed in the marshes, and none in the inland regions. It is only occasionally common in the marshes during the migrations. The most of my

Fig. 5. In the third cove south of Biemiller's Cove. The *Nelumbo lutea* Consocies mingled in the left background with *Pontederia cordata* Society: the general background being the *Phragmites phragmites* Consocies of the Marsh Formation. Long-billed Marsh Wrens and Florida Gallinules prefer such places. (Photo by Otto Jennings.)

records are of from one to a dozen individuals. Single individuals visit the Oberlin Water Works reservoir during the spring migrations, and occasionally one is seen on the small field ponds inland. The Blue-wings mostly remain away from groups of other species, feeding in the vegetaion covered areas of the marsh, from where they do not rise readily.

Oberlin migration dates are for arrivals April 21, departures May 4, Cedar Point arrivals March 30, bulk departures April 25. The last seen in 1907 was November 19.

26. *Spatula clypeata.*—Shoveller.

Another relatively uncommon species. On April 6, 1902, and September 25, 1899, there were visitations to the Oberlin Water Works reservoir. Small companies are usually seen at the east end of the marshes during late March and early April. Dates of occurrence are too few and too variable to indicate the times of migration. Gunners report it as regular but scarce at both seasons. The evidence seems to point to a marked decrease in numbers during recent years. My experience with it has been that it prefers small areas of open water in the narrower parts of the marsh.

27. *Dafila acuta.*—Pintail.

This is still a common duck in the migrations, but its numbers are certainly decreasing. Up to 1900 numbers were regularly recorded in their passage across the country almost anywhere, but since that time practically none are seen except in the marshes. There are days when this is the commonest of the ducks, but the periods of such abundance are short. Small flocks have visited the Oberlin Water Works reservoir early in the morning, but left with the first signs of the awakening of the populace. They are nervous and wary always, but doubly so after a short experience with the gunners at the marshes. They are usually seen in the companies which are made up of Baldpates and Lesser Scaups, with a few others, in the middle of an extensive open area near the mouth of Black Channel, or farther west in the open Bay, where the vegetation reaches the surface.

My earliest spring record is February 22, 1908, following a mild winter, and the latest spring record is April 29, 1907. Fall records are September 25, 1899, to November 26, 1907.

28. *Aix sponsa.*—Wood Duck.

My experience with this duck in this region indicates that the minimum numbers were reached from 1899 to 1901, and that since the latter year it has been increasing perceptibly. During the three years mentioned none were seen. In 1902 four were seen; none in 1903; but since then it has been of regular occurrence. Taxidermists report a marked increase in the number received, and gunners speak of an increase. While no nests have been found there is every other reason for believing that a few pairs breed within the limits of the region. Stringent laws for the protection of this duck have proved of little avail.

THE FALCONES OF NORTH AMERICA.

BY REV. W. F. HENNINGER AND LYNDS JONES.

The reason for this proposed series of papers lies back of numerous personal requests from bird students who find the group difficult, especially in field identification, that something might be attempted in the way of descriptions to make the task easier or more certain. In presenting this first paper the writer (L. J.) does not feel any confidence that much has been done toward that end, for the reason that there is so much variation in color pattern within the species that anything less than a series of exceptionally well executed color plates must fail of giving a satisfactory impression of the species. In fact, one must needs spend a good deal of time with each species, scrutinizing every characteristic of flight, feeding habits, voice, — life history, in order to feel much certainty about some of the species. This first paper is presented at this time with a view to ascertaining whether enough is accomplished toward the ends desired to warrant a continuance along the same line, or whether changes ought to be made, and what changes. The authors therefore solicit criticisms and suggestions from every source.

It has been deemed best to present photographs of actual specimens rather than line drawings or made up pictures, giving in the pictures only the parts that are important in field identification. It is gratuitous to say that the difficulties of this method have not been fully met.

The arrangement of the species does not copy any method, but is one which, in the working out of the scheme, seems to the authors to be the most natural one. It is only fair for the writer (L. J.) to say that both the final arrangement and the most of the descriptive matter is the work of Mr. Henninger, to whose untiring energy the work is largely due.

FALCO ISLANDUS (*Brünn*).

WHITE GYRFALCON.

Geog. Distrib.

Arctic regions, including Arctic America and Greenland, accidental in British Columbia, Maine, Toronto; north to 81°55′; breeding in northern Greenland, Bering Island (lat. 55°), Ungava Bay Labrador, Tuxsuk River, Alaska.

Measurements.

Male; length 59.87 ctm; extent 129 to 140 ctm; wing 37 ctm; tail 23.61 ctm; tarsus 5.53 ctm; middle toe 5.05 ctm; culmen 2.34 ctm.

Female: length 59.80; wing 39.80; tail 25.38; tarsus 6.12; middle toe 5.32; culmen 2.59.

Diagnostic Marks.

Thighs and lower tail coverts pure white. Prevailng color of plumage white. Large size.

Plumage.

White, often pure, usually with dark markings. Adult: Top of head and neck narrowly streaked with dusky, upper parts more or less transversely spotted or barred with slatish dusky, lower parts no well defined markings.

Young: nestling like adults (Chapman, Auk XVII, p. 387).

Flight and Habits.

Flight elevated, rapid beats then a short sail. Bold, strikes its prey with bullet-like swiftness (Authors) — "endurance greater than swiftness, rather slow." (Kumlien)—sitting like a Tern; carriage otherwise noble and striking; shy; attacks the Bald Eagle; molested by the Raven; living mostly in pairs, seldom gregarious. Formerly much used in falconry. Migrates at times.

Food.

All kinds of sea-birds, as auks, gulls, murres, sandpipers;

also rabbits, lemmings, hares, ptarmigans.

Voice.

A piercing, almost thrilling scream, "gyak."

Nest.

On inaccessible cliffs, in close vicinity of breeding waterfowl; composed of sticks, lined with moss, hay, hairs and feathers.

Eggs.

Laid end of May and in June, 2 to 4—60 x 48 mm 59.5 x 46.5 mm (Bendire); 60.45 x 43.8 mm (Davie); reddish white ground color marked with varying shades of red; texture rough.

Time of incubation unknown.

FALCO RUSTICOLUS (*Linn*).

GRAY GYRFALCON.

Two subspecies are included under this specific heading: *Gyrfalco*, (Linn.) the Gyrfalcon, and *obsoletus*, (Gmel.) the Black Gyrfalcon.

Geographical Distribution.

Gray Gyrfalcon: northern parts of the Arctic Region (except Norway and Sweden), breeding everywhere; occassionally south in winter to the Northern United States, British Columbia, Wisconsin.

Gyrfalcon: northern Europe, and in America from Labrador and Hudson's Bay to Alaska.

Black Gyrfalcon: coast of Labrador south to Canada, Maine, Rhode Island, and New York.

Measurements.

Gray Gyrfalcon: Male; length 52.32, wing 35.86, tail 21.67, culmen 2.29, tarsus 6.17, middle toe 5.03.

Female; length 59.69, wing 40.13, tail 24.77, culmen 2 54, tarsus 6.24, middle toe 5.23.

Gyrfalcon: Male; wing 34.42, tail 21.67, culmen 2.29, tarsus 5.99, middle toe 5.00.

Female; wing 39.37, tail 24.49, culmen 2.59, tarsus 6.32, middle toe 5.33.

Black Gyrfalcon: Male; wing 36.32, tail 21.97, culmen 2.29, tarsus 6.12, middle toe 4.92.

Female; wing 39.80, tail 24.94, culmen 2.59, tarsus 6.68, middle toe 5.33.

Diagnostic Marks.

Lower tail coverts always streaked with dusky (in contrast with *islandus*), upper parts with white never prevailing; lighter colored (but darker than *islandus*) is Gray Gyrfalcon, darker is Gyrfalcon, and the darkest form is Black Gyrfalcon.

Color Pattern.

Adult: Top of head much streaked with white, upper parts barred with blackish and grayish or buffy white, tail with sharply contrasting bars of light and dark, nearly equal in width; thighs and flanks always barred with some dusky.

Young: With much whitish above in spots, below with the dark stripes narrower than the white interspaces.

The Gyrfalcon has the head more dusky and the whole plumage with more extent of the dark markings.

The Black Gyrfalcon is still darker, with the darker markings prevailing so that the under parts appear dark.

Flight.

Apparently not distinguishable from that of the White Gyrfalcon.

Food.

Sea birds, ptarmigans, waders, rabbits, hares, squirrels, lemmings, mice.

Voice.

Ky ak, ke a, ke a, ke a, increasing in rapidity.

Nest.

On ledge of cliffs, on the sides of ravines, and similar places, also in the tops of tall trees, usually pines, composed of sticks and small branches, lined with moss, hay, hair, feathers, etc.

Eggs.

Three or four, laid from May 10 to the middle of June. Texture rough. Ovate. White or creamy ground color which is scarcely distinguishable beneath the spots and blotches of various shades of reddish brown, clay and fawn color, the markings are small. Size 59.5 x 45 mm (*gyrfalco*), 57.4 x 45.1 mm. (*obsoletus*) (Bendire).

FALCO PEREGRINUS (*Tunst*).

PEREGRINE FALCON.

Three forms are grouped under this heading, according to the latest ruling of the committee on nomenclature. These are the Peregrine Falcon, with scientific name as above, *F. p. anatum* (Bonap.), Duck Hawk, and *F. p. pealei* Ridgway Peale's Falcon.

Peregrine Falcon: Eastern Hemisphere, Greenland.

Duck Hawk: North and South American south to Chili (as the name *peregrinus* is intended to indicate, a great wanderer); breeding locally throughout the United States, Labrador, Hudson's Bay, and British Columbia.

Peale's Falcon: Pacific Coast from Oregon and Washington to the Aleutian and Commander Islands, this also forming the breeding range.

Measurements.

Peregrine Falcon and Duck Hawk: Male, length 42.72, wing 31.07, tail 17.46, culmen 1.96, tarsus 4.42, middle toe 4.92.

Female, length 48.79, wing 36.27, tail 20.85, culmen 2.41, tarsus 5.31, middle toe 5.41.

Peale's Falcon: Male, wing 32.89, tail 17.15, culmen 2.13, tarsus 4.92, middle toe 4.85.

Female, wing 37.23, tail 19.91, culmen 2.44, tarsus 5.48, middle toe 5.41.

Diagnostic Marks.

Black moustache, bluish-gray back, long pointed wings, swift flight.

Color Pattern.

Adult: top of head deep black, darker than the back, which is bluish ash, underparts cream color forward, buffy backward; spotted with tear shaped or crescentic black or dark marks forward running into bars backward.

Young: ground color of lower parts ochreous with sooty brown stripes where the adults have crescentic marks and bars; upper parts sooty brown.

Peregrine Falcon is more marked below, Duck Hawk less so or immaculate, while Peale's Falcon has the color of the top of the head the same as the back, and usually more heavily marked below.

Flight and Habits.

These are bold birds, seeming to have little fear of man, indeed daring to dart in and snatch the bird just killed almost from beneath the hunter's hand. The flight is almost incredibly swift when prey is being pursued. At times soaring and rising to great heights is practiced. At the nest these birds are noisy and shy, at other times usually quiet. They become attached to certain localities.

Food.

Almost any birds up to the size of ducks and grouse, hares, poultry, dragon-flies.

Voice.

Ka yak, ka yak—kea kea. Often a cackling noise.

Nest.

On cliffs or in the hollow limbs of very tall trees. Nest

composed of a few bits of twigs, rotten wood, with a little moss, wool, or feathers.

Eggs.

From three to five, laid from March to July, depending on the latitude. The eggs are rounded ovate, creamy white or buffy, spotted with cinnamon brown, reddish brown, or chocolate. Size about 52 x 42.2 mm. The eggs vary greatly in color and size. Incubation lasts about 28 days, both parents sharing.

FALCO MEXICANUS (*Schleg*).

PRAIRIE FALCON.

Geographical Distribution.

United States, from the eastern border of the plains, and from the Dakotas south into Mexico; casual eastward to Illinois. Breeds throughout the United States range.

Measurements.

Male: Length 43, wing 30.86, tail 17.15, culmen 1.97, tarsus 4.45, middle toe 4.86.

Female: Length 48.26, wing 35.24, tail 20.19, culmen 2.35, tarsus 5.53, middle toe 5.46.

Diagnostic Marks.

A blackish patch on the side of the throat, distinctly streaked under parts, and a gray-brown back. Strong, quick, dashing flight.

Color Pattern.

Adult: Top of head sooty black, or deep black, distinctly darker than the back; under parts varying from pure white to creamy buff, distinctly but not heavily marked with blackish, rarely unmarked below.

Young: Lower parts more buffy and striped with dusky, upper parts with the colors obscured by brownish edgings of the feathers.

Flight.

Strong, easy, straight-away flight; swift, dashing descent for prey. It is doubtful if any other bird of prey is its equal in flight.

Food.

Birds of various kinds, up to the size of a meadowlark; rabbits, rodents of various sorts. They seem to prefer bird flesh, but during a scarcity of such diet may be driven to any of the smaller animals.

Nest.

On the ledges of cliffs or precipices, rarely in open nests in trees. The ledge nests seem to be merely detritus and food leavings. Open nests in trees must necessarily be composed of twigs or weeds or other coarse material, whether placed there by bird or simply utilized after the departure of the original builder.

Eggs.

Three to five. The nesting time varies from late March in its southern range to early June northward. The eggs are on the average lighter in color than the eggs of any other Falcon except the Sparrow Hawk. The ground color is creamy white, rarely so completely overlaid as to be obscured. The markings are blotches and spots of different shades of reddish brown, tawny, and chocolate. The eggs average 53 x 41.5. (*Bendire*).

Next to the Sparrow Hawk this is the commonest of the hawks of the western regions. Without doubt it is harmful, at times markedly so, but there is little doubt that it is also beneficial to a considerable degree. It has been known to kill Sharp-tailed Grouse. It seems to decidedly prefer the flesh of birds.

FALCO COLUMBARIUS *(Linn)*.

PIGEON HAWK.

Under this chapter are three races which have been given recognition. The extreme northwestern form, which is the darkest one is *F. c. suckleyi (Ridgway)* Black Merlin; the eastern form is typical *columbarius*, Pigeon Hawk, and is the median form, while the form occupying the middle western parts of the country, but ranging to the Pacific coast is *F. c. richardsonii (Ridgway)*, Richardson's Merlin, it being the lightest, in conformance to its more desert habitat.

Geographical Distribution.

Pigeon Hawk, occupies the whole of the eastern part of North America east of the Rocky Mountains, breeding chiefly north of the United States, wintering south to northern South America; less common west of the mountains.

Black Merlin, is confined to the Pacific Coast region from northern California to Sitka, Alaska, ranging eastward in Washington and Oregon.

Richardson's Merlin, occupies the interior of North America, from the Mississippi River westward to the Pacific Coast, from the Saskatchewan region to Texas, Arizona, and Mexico.

Measurements.

Pigeon Hawk: Male; length 27.24, wing 17.80, tail 13.11, culmen 1.24, tarsus 3.43, middle toe 3.05.

Female: Length 31.81, wing 21.59, tail 13.72, culmen 1 45. tarsus 4.01, middle toe 3.42.

Black Merlin: Male; wing 19.76, tail 13.46, culmen 1.57, tarsus 3.30, *(Mrs. Eckstorm)*.

Female: Wing 21.25, tail 14.60, culmen 1.47, tarsus 3.94, middle toe 3.50, *(Ridgway)*.

Richardson's Merlin: Male; length 27.94, wing 20.24, tail 12.95, culmen 1.40, tarsus 3.76, middle toe 3.20.

Female; length 32.51, wing 22.73, tail 15.27, culmen 1.45, tarsus 3.45, middle toe 3.10.

Diagnostic Marks.

These are small, very dark hawks, heavily streaked with umber brown on the under parts, of swift flight, and sharply pointed wings which seem to reach forward to grasp the air.

Plumage.

Pigeon Hawk: Adult male; above dark slaty blue, with rusty edges and black shafts to the feathers, below whitish tawny, heavily streaked with dark umber brown which runs into bars on the flanks, and into fine pencilings on the throat and cheeks. Inner webs of the wing quills spotted or barred with white, outer webs with traces of grayish. Tail with four narrow white and four black bars, its tip white.

Adult female and young male: above dark umber brown, head with rusty edgings; below darker than the adult male. Wing spots and bars ochreous.

Black Merlin: Distinctly darker in general coloration.

Richardson's Merlin: Distinctly lighter in general coloration. Tail crossed with five blackish dusky and six bluish-gray bands.

Flight and Habits.

In flight the swiftest of the small hawks. When perched it sits erect and is alert, but seems less wary than most hawks. At its nest it is courageous and a fierce fighter.

Food.

Principally small birds, rarely mice and small squirrels.

Voice.

"Ke-ah, ke-ah, ke-ah," often repeated.

Nest.

In holes in trees, on cliffs, or in crotch of a tree. The nest is a bulky affair of sticks with a lining of soft bark, long hairs, dry grass, feathers, and moss. It sometimes fits an old crow nest over.

Eggs.

Four or five, varying greatly in form and markings, aver-

aging 41.31 mm.; creamy white, spotted with reddish, cinnamon, or chocolate, with a few heavier spots of the same colors. The eggs are laid in March to June, depending upon the latitude. Incubation lasts about 22 days.

FALCO ÆSALON (*Tunstall*).

MERLIN.

Geographical Distribution.

Europe, Asia, Africa. Accidental at Cape Farewell, Green land (May 3, 1875).

Measurements.

Male: Length 27.96, wing 19.62, tail 13.21, culmen 1.19, tarsus 3.58, middle toe 2.92.

Female: Length 33.65, wing 22.43, tail 15.67, culmen 1.37, tarsus 3.71, middle toe 3.13.

Diagnostic Marks.

Above bluish-gray, beneath rusty with brownish stripes: black subterminal bar of closed tail. Flight.

Plumage.

Adult male: Upper parts bluish-gray with fine black shaft streaks, hind neck spotted with whitish and buffy, tail with 6 or 7 concealed black bands, tipped with white; cheeks with a distinct 'moustache.' Below light rusty streaked with brownish.

Adult female: Upper parts brownish, top of head with black streaks; tail with about eight narrow pale bands; lower parts more whitish or buffy with brownish streaks.

Flight and Habits.

A bold, swift and graceful hawk; hunts in pairs; is fond of soaring high in the air at times.

Food.

Mostly small birds, occasionally locusts and beetles.

Voice.

Ke ke ke ke, ki-ha, ki-ha.

Nest.

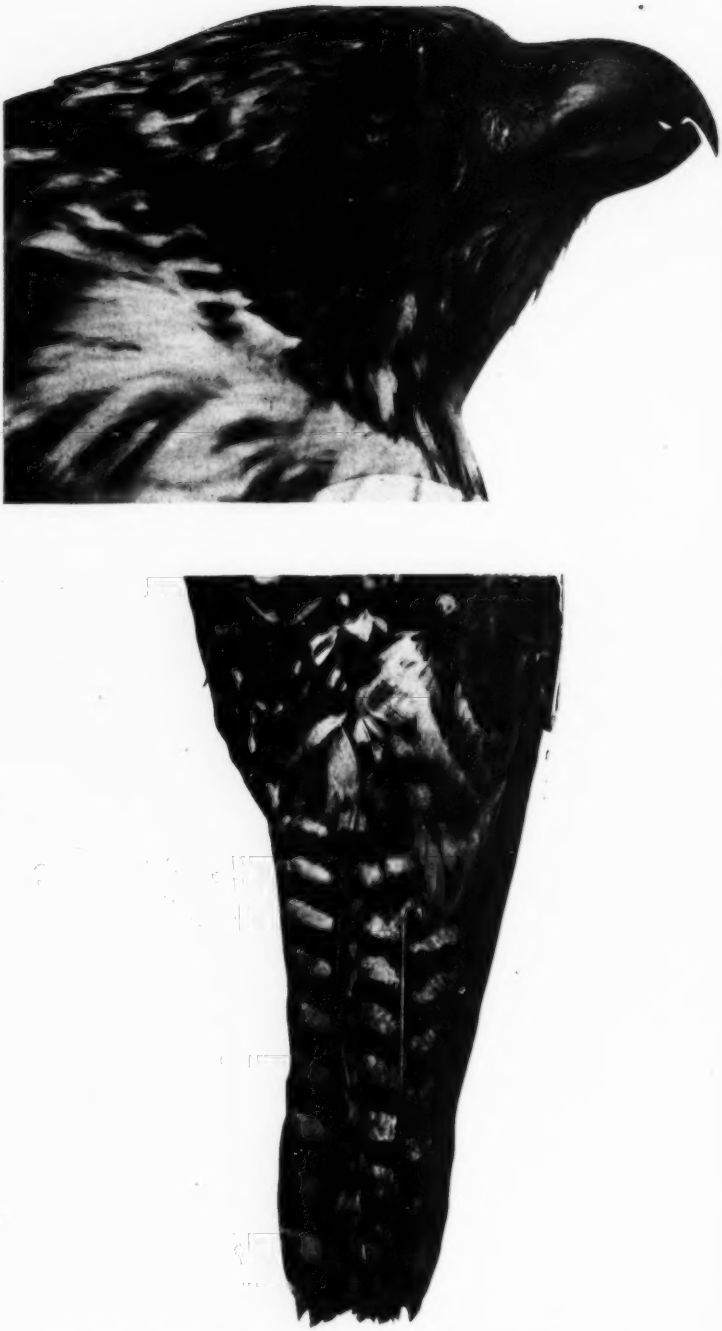
On ledges of cliffs, in trees, even on the ground; made of sticks, lined with moss, dry grass, and feathers.

Eggs.

Three to six, laid in late May or June. 38 x 30 mm. Cream or clay-color, with many spots of reddish brown and blackish-brown, often entirely obscuring the ground color. Only one brood is raised.

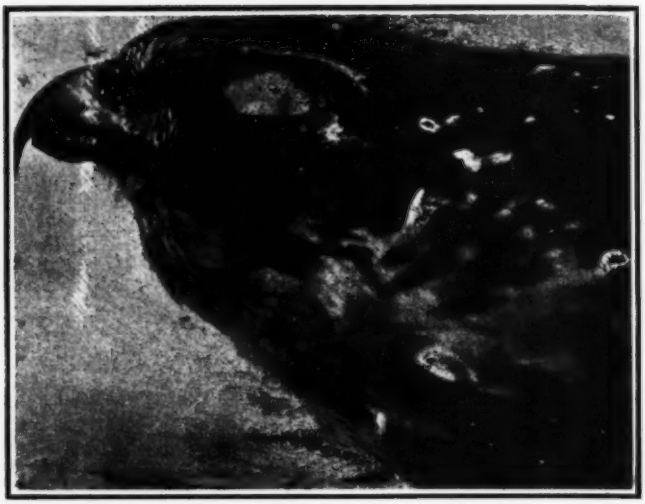
Falco islandus. White Gyrfalcon, female. (No. 608 collection of W. F. H., February, 1906, Kangek, near Godthab, Greenland.)

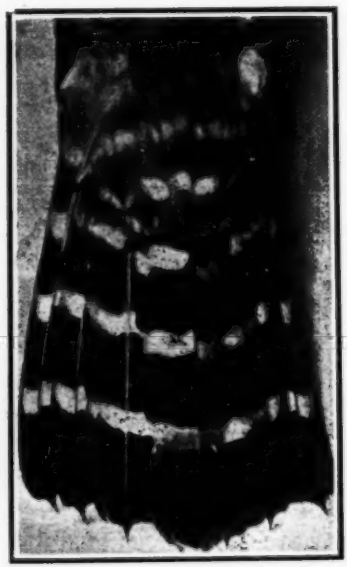
Falco islandus, White Gyrfalcon, female. (No. 608 collection of W. F. H., February, 1906, Kangek, near Goodhab, Greenland.)



Falco rusticolus, Gray Gyrfalcon, female. (No. 607 collection of W. F. H., October 29, 1905, New Herruhut, Greenland.)

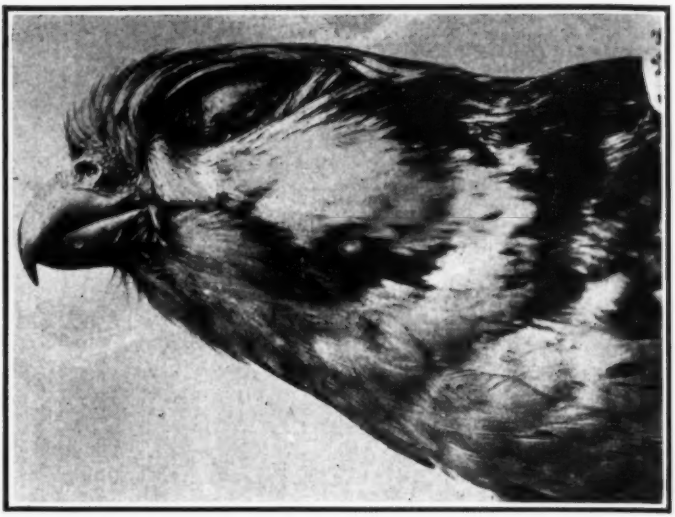
Falco peregrinus anatum, Duck Hawk, old male. (No. 624 collection of W. F. H., ugust 11, 1904, Cameron Co., Texas.)





Falco columbarius, Pigeon Hawk. (No. 520 collection of W. F. H., April 10, 1895, Cameron Co., Texas.)

Falco æsalon, Merlin. (No. 615, collection of W. F. H., November 30, 1902 Wladikawas, Russia.)



Falco mexicanus, Prairie Falcon, male. (No. 3154 collection of Oberlin College, W. L. Dawson, April 3, 1896, Chelan, Wash.)

SOME WASHINGTON BIRD NOTES.

BY DR. R. W. SHUFELDT.

For the past seven years, and more, I have been residing in the city of New York, engaged upon special art and medical work which afforded me but little opportunity to see much of the birds anywhere. Prior to that time I had been living in Washington, D. C., where both autumnal and vernal migrations were always carefully studied by me for miles about, and there was no question in my mind, the last few years that I was here, as to the fact that both land and water birds were rapidly decreasing in numbers. Some species were rarely or ever seen, either in the spring or in the fall. Several papers were published by me on the subject, and some of the probable causes for the falling off given, one of which I remember was the killing by boys by means of an air-gun which was very popular at the time with them. Recently I have returned to Washington to live and taken a home within three or four minutes walk of the Zoological Garden (3356 18th St.). It is practically surrounded by open country and extensive tracts of heavy timber. After becoming settled, which required several weeks, I discovered that Mr. Robert Ridgway owned his home across the street, and was at the time away on a vacation in the west.

The spring migration of birds had just about commenced, and it was not long before I made very early morning visits to the neighboring woods to note what species were here and especially as regards their abundance (April 10, May 12). Judging from the chorus that saluted my ears before arriving, they had not been wiped out altogether, and as I had not had such a treat for many years, my feelings may be easily imagined by any thorough-going ornithologist who has ever been submitted to a similar term of starvation of that character.

Great was my delight when I discovered that a very marked change had taken place during my years of absence, for not only had birds become numerous again, but were evidently

less wary, and an unusual increase had taken place in some species. For instance, judging from my own personal observation, such a bird as the Red-headed Woodpecker *(Melanerpes erythrocephalus)*, ten years ago was one of the most uncommon species to be taken in the District of Columbia anywhere. The other morning when I was out (May 13, '09) I counted twelve of these beautiful birds in a short walk of a little less than five miles, and heard others calling in the distance. Cardinal Grosbeaks *(C. cardinalis)* were very abundant and the males in beautiful plumage, while in a beech tree close to my home there was a flock numbering over an hundred Purple Finches *(Carpodacus purpureus)*. All the common birds were in full force, such as Robins, Brown Thrashers, Catbirds, Flickers, and any number of others. What interested me more than anything else was to observe the abundance of warblers that were on. They were not as plenty as I used to see them forty-five years ago, but they were nevertheless very largely represented.

In one straggling troop that were feeding as they passed through some large and adjacent trees, I noted several pairs of Blackburnians *(D. blackburniæ)*, ditto Black-throated Blues and Greens *(D. cærulescens, D. virens)*, also many Parulas, Cape Mays, Chestnut-sided, Bay-breasted, Blackpolls, with numerous others, and one Cerulean *(D. cærulea)*. In other parts of the woods and along the roadside they were equally abundant, and associated with still other species. (There is a pair of superb Red-headed Woodpeckers within thirty feet from my study window as I write these lines and they are nesting not over that many yards from my table.)

In a few days I shall look up the Water Birds, and hope to meet with an equally gratifying state of affairs in their case. Later on in conversation with a number of the best authorities and observers who have paid attention to the ornithology of the District of Columbia for many years, I was pleased to learn that the facts set forth in this brief communication were quite true.

ROUGH-LEGGED HAWK NOTES.

BY W. E. SAUNDERS.

This is a bird that is not often seen by any one but a duck hunter. Once or twice I have had good opportunity of watching this bird for a little while and a certain Autumn day showed one hovering after the manner of the Sparrow Hawk, over a stumpy field where there were not enough trees to afford a perch at the desired spot. To my mind this was a hint that the Hawk had nested in a prairie country where he had accustomed himself to that method of hunting. How these Prairie Hawks must welcome the advent of railroads with its telegraph poles! I can easily imagine that the large numbers of Swainson Hawks, which I saw in my first trips West in the nineties, were really attracted to the railroad by these perches. Before then, the dry prairies must have been hunted almost exclusively on the wing which is contrary to the nature of the Buteo as noticed in the east. Twice in the spring, about the 26th of March, I have seen two or more of these birds, not far apart, near London, but on dismounting from my wheel to watch them, although I got behind a snake fence and used my glass through it, the bird soon flew away, calling once or twice with a note very similar indeed to that of the Red-tail.

In my list of average dates of arrival in the Autumn, which I have compiled from notes extending over twenty-five years, I have a memorandum on October 29th,—"this is the day to see Rough-legged Hawks," but it was only this Fall that I found out *where* was the *place* to see them. This was on November 2nd, 1908, when Mr. J. S. Wallace and I were near the end of Point Pelee. About the middle of the morning we saw the first Rough-leg. He was circling over a field after the manner of a migrating Broad-wing and drifting south at the same time. Soon he ceased circling and flew past so near us that his markings could be seen very plainly. On the way to camp that morning we saw a number of others but it was not until after dinner that they really appeared in numbers. I was sitting

outside preparing some birds for our drive to the station that afternoon, when I noticed a Hawk at a considerable distance and very high. After a few moments others began to arrive. They kept coming until there were about twenty-six in sight at once and the resemblance between their methods and those of the Broad-wing was very striking. As they reached the location where the leader had chosen to circle each one spread his tail as does the Broad-wing, and joined the circling band. This continued until the Hawks got so numerous that I had thirteen at once in the field of my glass. They were, I should say, half a mile high, so distant that it was almost impossible to say whether they were Red-tails or Rough-legs. At intervals one heard the Red-tail call, but I am not one that can distinguish between the cry of these two birds. After awhile they began to straggle off towards the south but the day was pleasant and those circling apparently disliked to leave the Point. Doubtless, they could readily see the Ohio shore and the Islands between, and they were certainly not, as many others, birds who seem to fear the flight over the water, but the main body so persistently refused to leave their playground that after awhile others came drifting back from the south and joined them once more, and it was on some of these travelers that I had the opportunity of deciding definitely that they were Rough-legs and not Red-tails.

Of course the probabilities all pointed to Rough-legs. We had seen Red-tails in numbers before, but never acting like this. Moreover, on that particular day more Rough-legs had been seen, prior to this circling band, than Red-tails, so that I was confident that when an opportunity occurred to make their identity positive, the verdict would be Rough-legs. The results of several such opportunities were alike, each one proving as I had expected to be a Rough-legged Hawk, so that I had no hesitation in deciding that these strange acting hawks were all of that species. On this day we saw about 40, a number approximately equal to all that I had ever seen in Ontario before and the finding of such a large number was very unexpected, but Point Pelee is a place that demonstrates

the truth of the old adage, that "It is the unexpected that happens."

SPRING MIGRATION IN MIDDLE WESTERN OHIO.

BY W. F. HENNINGER.

This spring in many respects resembled the wet season of 1907. Birds that usually appear by the middle of April not showing up till late in May, cold waves driving back to unknown regions some of the earlier migrants, for instance the Chimney Swift came on April 24th, 6:30 P. M. and stayed that day till the evening of the 25th, when they disappeared till May 3rd. May 5th and 6th were the only dates on which the more tender birds arrived in great hordes; the ducks and water-birds seemed to be in no way affected by the weather in their migrations. Some interesting and early records were made. I give the list of 140 migrants according to first dates and individuals with some annotations:

February 20—Robin 2.

February 22—Killdeer 1.

March 1—Bewick's Wren 2. Bluebird 2.

March 5—Bronzed Grackle 4.

March 6—Loramie reservoir — Mallard 5. Red-legged Black Duck 1.

March 8—Towhee 2. Phoebe 1. Field Sparrow 2. Red-winged Blackbird 5. (March 9—Dawson's earliest record, perhaps earliest state record.) Pintail 5—shot, American Merganser 1,—Loramie reservoir.

March 16—At Canal (Miami)—shot. American Golden-eye 7. Shoveller 1. Pied-billed Grebe 1. American White Pelican 3 on a ditch in the field five miles west of New Bremen. (An early record and one of the few spring records in this state).

March 19—Vesper Sparrow 3. Turkey Vulture 4.

March 20—Lesser Scaup Duck 1—Loramie reservoir—shot.

March 24—Loramie reservoir — Green-winged Teal 2. Baldpate, 2 females—shot. This agrees with my dates in Southern Ohio and is earlier than those for Oberlin and Northern Ohio. Pectoral Sandpiper 4. Early record.

March 25—Wood Duck 6—Loramie reservoir.

March 26—Chipping Sparrow 2.

March 27—Hooded Merganser 2—shot. Scaup Duck 8—Loramie reservoir.

March 28—Grand Reservoir—Woodcock 1. American Coot 10.

March 30—Horned Grebe 1.—Canal.

March 31—Mourning Dove 2. Great Blue Heron 1—Shelby county.

April 1—Grand reservoir—Wilson's Snipe 1. Tree Swallow 3. Herring Gull 5. Bonaparte Gull 2.

April 3—Barn Swallow 1.

April 5—Purple Martin 2—Late date.

April 8—Loramie reservoir—Blue-winged Teal 10. Ruddy Duck 4. Ring-necked Duck 1.

April 10—Brown Thrasher 1. Olive-backed Thrush 2. Hermit Thrush 1.

April 14—Bufflehead 2—shot—Canal—late. American Pipit 7. Northern Shrike 1—last date. Tree Sparrow 2—last date. Pigeon Hawk 1. Yellow-bellied Sapsucker 1.

April 15—Ruby-crowned Kinglet 2—Staid till May 15.

April 16—Grasshopper Sparrow 2. Savanna Sparrow 10. Red-breasted Merganser 10—shot—Loramie reservoir.

April 17—Black-crowned Night Heron 10—shot—Loramie reservoir. Early state record.

April 18—White-crowned Sparrow 2.

April 19—At the Grand reservoir—Least Sandpiper 1—shot—earliest state record. Greater Yellow-legs 16—1 shot. Bartramian Sandpiper 2. American Bittern 1—shot. Spotted Sandpiper 9. American Golden Plover 25. Last Winter Wren seen. House Wren 3. Louisiana Water-Thrush 2. Last Fox Sparrow. Sora 2. King Rail 2. Common Tern 13. Black Tern 3. Swamp Sparrow 3. Rough-winged Swallow 3

April 20—Marsh Hawk 2. Rusty Blackbird 5.—lasts.

April 24—Chimney Swift 6:30 p. m. sharp.

April 25—Oven-bird 2.

April 28—Blue-gray Gnatcatcher 3.

April 30—Baltimore Oriole 4. Yellow Warbler 6. Catbird 1.

May 3—Black-throated Green Warbler 2. Black-throated Blue Warbler 1. Slate-colored Junco 5—Last date. Bobolink 3—5 p. m. sharp.

May 4—Red-eyed Vireo 3. Orchard Oriole 1.

May 5—Warbler Day: Kingbird 2. Myrtle Warbler 1. American Redstart 2. Black and White Warbler 1. Wilson's Thrush 1. Semipalmated Sandpiper 4.

May 6—Migration at its hight—Birds in swarms. Water-Thrush 1. Blue-winged Warbler 3. Golden-winged Warbler 2. Orange-crowned Warbler 1. Tennessee Warbler 10. Blue-headed Vireo 2. Gray-cheeked Thrush 20. Scarlet Tanager 7. Yellow-legs 1. Northern Yellow-throat 5. Yellow-breasted Chat 2. Chestnut-sided Warbler 3. Blackburnian Warbler 50. Magnolia Warbler 2. Green Heron 2. Cliff Swallow 2. Yellow-billed Cuckoo 2. Black-billed Cuckoo 2.

May 7—Cape May Warbler 2.

May 10—Wood Thrush 3. Least Bittern 5. Long-billed Marsh Wren 20.

May 12—Bay-breasted Warbler 5. Black-poll Warbler 2. Dickcissel 1. Whippoorwill 2. Nighthawk 1.

May 14—Indigo Bunting 1.

May 15—The laggards coming in: Nashville Warbler 10. Green-crested Flycatcher 2. Least Flycatcher 2. Alder Flycatcher 6. Palm Warbler 10. Canadian Warbler 30. Wilson's Warbler 4. Ruby-throated Hummingbird 1. Yellow-throated Vireo 4. Mourning Warbler 1. Cerulean Warbler 1.

May 18—Wood Pewee 5.

May 21—Yellow-bellied Flycatcher 5.

No "All Day with the Birds" was attempted this year. Attention was paid principally to first dates of migrants and

the conditions that governed the first arrivals. These were mostly on rainy or cloudy days, for the earlier birds, while the warblers waited carefully for the warmer waves.

ABNORMAL COLORATION OF THE SCAUP DUCK.

BY W. F. HENNINGER.

Among a series of 10 (8 males and 2 females) of the Scaup Duck *(Marila marila)* shot this spring on the Loramie Reservoir and the Miami Canal, there are three males (all shot March 27, 1909), that show a decidedly abnormal coloration. While the normal plumage of the belly and sides is pure white, one male (No. 736 coll. W. F. H.) has the biggest part of the belly grayish, with darker shaft streaks to each feather and a few brown feathers in the black breast. One male, No. 734 (coll. W. F. H.) has more brown feathers on the breast than black ones, these brownish feathers extending well up among the neck feathers. No. 738 (coll. W. F. H.) male has not only more brownish breast feathers than No. 734, but the whole lower breast, belly and abdomen beyond the anus are overlaid with a rusty-brownish wash extending upward on the side, and has one bright brown tail feather. This certainly was not caused by grease as the specimens were freshly killed, nor by any compound of iron in the water as suggested by Mr. I. F. Arrow in the Auk, April, 1909, p. 189. The color would not yield to chemical treatment and must be due to other causes. Mr. Leon J. Cole in the Osprey, 1897, p. 69, records a similar specimen of the Lesser Scaup Duck as No. 738 of my collection, only mine is the Big Scaup. No doubt there may be other speciments of *Marila marila* showing similar abnormal coloration in the large museums, but if so, they certainly have not been brought to light and it seems worth while to direct the attention of the working ornithologists to such occurrences.

AUDUBON CORRESPONDENCE.

BY FRANK L. BURNS.

A LETTER FROM AUDUBON TO HARLAN, DESCRIBING A SUPPOSED NEW SPECIES.

Through the kindness of Mr. Alfred C. Redfield, of Wayne, Penna., I am enabled to offer an unpublished letter from John James Audubon to Dr. Richard Harlan, of Philadelphia. It is closely written on a single sheet, postmarked "Charleston, S. C., Dec. 23," and contains his original description of the *Polyborus cheriwayi*, Audubon's Caracara, from the freshly killed bird. The date of capture does not exactly agree with his published account. Apparently, Dr. Harlan made no effort toward publicly ushering this bird into our North American fauna; and its introduction was not accomplished until 1834, when Audubon published his second volume of Ornithological Biography, then fully aware that the species was not wholly new to science, having been accredited to tropical America many years before.

This letter was presented by Mrs. Harlan to the Great Central Fair for the U. S. Sanitary Commission, during the Civil war; and has since been a part of the Redfield collection.

"Description of a New Species to be named by Doctors Harlan or Pickering.—shot at St. Augustine, November 24, 1831—by *J. J. Audubon*.

Bill along the ridge 1¾ Inch. Along the Gap 2¼.—$^{9}/_{10}$ of an Inch high, depressed, semi-circular above, slightly bent toward the tip, with acute edges.—Lower mandible truncate, edges sharp—both pale blue. Cere broad and along with the fleshy part around the mouth and chin deep Carmine Colour. —Tongue muscular, fleshy, tipped with a hard cartilage, the latter bright Yellow tipped with black, the former carmine.—Nostrils, small placed near the outer edge of the cere, nearly [illegible]. Eyes bright umber edged with red and yellow skin—eye brows not prominent—bristles around and on the lower parts of both mandibles, black, recurved, stiff.—Upper

part of the head covered with long, loose, brownish feathers, all of which are erectile. Wings, back and rump deep chocolate or brown—edged with paler.—2d, 3d, 4th and fifth Primaries, shafts white for several Inches, crossed on the outer Vein with brown—4 quill longest.—upper tail Coverts with Tail which is composed of 12 broad feathers light Buff as well as the femorals and under tail feathers, crossed with regular streaks of brown, bro [torn by seal] banded at tip.—Shafts of the same above, and beneath White.—Throat, Sides of the head and neck feathers to the shoulders above and the [torn by seal] beneath, bright ferrugineous marked longitudinally with streaks of deep black each with rufous, divided in the center with rufous—body beneath as the back. Thighs, muscular, very dark brown, longish—Tarsus 3 and ¾ Inches long. Middle toes 2⅛,—connected with the outer by a small membrane—All bright yellow.—Scutellate above, rough beneath.—Claws long, nearly straight, black.—

Total length from tip of bill to end of Claws 24⅝ In. Wings 15⅝ shorter.—Tail ½ Inch shorter than to the claws. Breadth four feet—Weight 2½ pounds.—Interior of the mouth yellow, skin of the body yellow—body muscular and tough—craw or bag of the stomach a mere pouch filled with putrid flesh—Deer and horse Hair, with many maggots.—Feed along with Buzards and Carrion Crows, tearing as they do the flesh from under their feet. Flight, high, protracted. Elegant.—Male Bird—Breed in the Interior of the Florida, rare.—

Make the best of this you can until you receive the Skin and recollect then that the colours have greatly faded since I made my drawing which was up to Nature when alive.!"

Ever yours, Dear Harlan, J. J. A.

NIDIFICATION OF THE WORM-EATING WARBLER

The wooded hills of Chester county, Pennsylvania, especially the long broken ridges bordering the Chester valley and the Brandywine creek, have long been famous as the breeding ground of the Worm-eating Warbler. I had promised two young friends, both members of the Delaware Valley

Ornithological Club, that I would initiate them into some of the mysteries of the domestic life of this little bird. Accordingly on the afternoon of the last day in May, 1908, we set out for a former favorite locality about a mile from Berwyn. It had been a number of years since I had given this species any particular attention, and it was some time before the nest and five eggs were found about half way up the hillside, under the usual drift of dead leaves. The photographer, who had actually located the nest, took a very good picture, showing the situation admirably, and according to my way of thinking, had slightly the best of the oologist, who fell heir to the nest, the first of the species he had personally collected. Most of my notes on this bird have been published. Chapman has given the average size of the egg as .69 x.53. Here I find it somewhat larger, however. Mean. .70 x .55, maximum, .76 x .59, minimum, .62 x .50. Five eggs are more often deposited than four.

FRANK L. BURNS.

Worm-eating Warbler, *Helmitherus vermivorus*, Daylesfield, Pa., May 31, 1908. (Alfred C. Redfield.)

THE WILSON BULLETIN

**A Quarterly Magazine Devoted to the Study of Living Birds.
Official Organ of the Wilson Ornithological Club.**

Edited by LYNDS JONES.

PUBLISHED BY THE CLUB, AT OBERLIN, OHIO.

Price in the United States, Canada and Mexico, one dollar a year, 30 cents a number, postpaid. Price in all countries in the International Postal Union, $1.25 a year, 40 cents a number. Subscriptions may be sent to Lynds Jones, Oberlin, Ohio, or to Mr. Frank L. Burns, Berwyn, Penn.

Officers of the Wilson Ornithological Club for 1909:

President—Frank L. Burns, Berwyn, Pa.

Vice-President—W. E. Saunders, London, Ont.

Secretary—Benj. T. Gault, Glenn Ellyn, Ill.

Treasurer—W. F. Henninger, New Bremen, Ohio.

Members of the Executive Council—Lynds Jones, Oberlin, O.; H. C. Oberholser, Washington, D. C.; B. H. Swales, Grosse Isle, Mich.

EDITORIAL.

The usual spectacle of appearing late is again presented. Indeed, the editor sees little light in the direction of promptness for months to come, since his time belongs to Oberlin College. The editorial work has to take remnants of time, being wholly incidental to regular work. The present number is later than usual, and later than the remaining two numbers for the year are likely to be because the June Number conflicts with the closing weeks of the college year, which are always full. If this tardiness worries the reader half as much as it does the editor he (the editor!) is very sorry.

Letters addressed to the editor at Birmingham, Ohio, during August and September, will reach him more promptly than if addressed to Oberlin.

W. L. Dawson, our fellow member, has seen his monumental work on the Birds of Washington through the press and has already begun delivery to subscribers. This book resembles his Birds of Ohio in general, but is far better in every particular. He is to be congratulated upon the completion of what seemed an all but impossible task.

The definite movement which has been set on foot by Professor Leon J. Cole, of New Haven, Conn., for tagging birds is worthy of more than passing mention. The aluminum strips used for the tagging—small strips with a number and the words "Notify the Auk, N. Y.," are to be bent around the tarsus of a bird, a careful record kept of the birds so tagged, and this record finally returned to Professor Cole. So many of these tags are being attached to birds this summer that great hopes are entertained that many of the birds bearing tags will be heard from. By this means it should be possible to determine with accuracy the wanderings of the birds. It is only by some such means that individual birds may be surely recognized.

FIELD NOTES.

BAIRD'S SANDPIPER (*Actodromas bairdii*) IN WAYNE COUNTY, MICHIGAN.—In the Wilson Bulletin for December, 1908, on page 207, Mr. P. A. Taverner credits Mr. Albert Jones with taking a Baird's Sandpiper on September 13. This bird was shot and identified by Mr. Walter C. Wood, who presented it to Mr. Jones. The Baird's Sandpiper was anything but rare during the autumn of 1908. I examined specimens taken on various dates by Walter C. Wood and Herbert H. Spicer. Personally, I did not meet with it until August 26, when I noted a flock of seventeen and took a specimen. From that date they were present on all visits until last seen on September 27. I secured my last birds September 23. These were all on the mud and water swale on P. C. 667, Ecorse Township, mentioned by Mr. Taverner.

J. CLAIRE WOOD.

THE DICKCISSEL IN WAYNE COUNTY, MICH.—In the Wilson Bulletin for June, 1905, and March and June, 1907, I gave my local observations of the Dickcissel prior to 1907 and will now bring them up to date. June 30 1907, I crossed the belt of open lands where the greater number of Dickcissels were seen the previous year. My attention was directed to a male by his song and I took the time to locate the nest. This was found by beating to and fro through the weeds until the female flushed. It was well concealed and placed in the thickest kind of weed growth about three feet above the ground and contained two fresh eggs. This was on P. C. 619, Grosse Pointe Township. No more birds were seen, but when I returned to this nest, July 7 three additional pairs were present. July 1 a male spent much time singing from a telegraph wire by the roadside on Section

17, Springwells Township. This was on the margin of a clover field into which the bird frequently flew and where a mate was probably brooding. During 1908 I was not in any of the localities where Dickcissels were previously observed and none were seen elsewhere.

Detroit, Mich. J. CLAIRE WOOD.

THE ROUGH-WINGED SWALLOW AND BLUE-GRAY GNATCATCHER BREEDING IN WAYNE COUNTY, MICHIGAN.—May 30, 1901, we located a colony of Rough-winged Swallows in Springfield Township, Oakland County, and all the eight nests examined contained eggs. May 30, 1902, this colony was reduced to three pairs and the two nests examined contained eggs. Assuming this as the proper time to look for sets in Wayne County I made a special trip May 29, 1903, to a suitable locality in Nankin Township. Six complete nests were found, but it was too early for eggs. This was probably a mere seasonal difference, however, for on my next attempt, May 31, 1908, the first burrow opened contained a slightly incubated set of seven eggs. This was on Section 22, Canton Township. Other pairs were noted, but not disturbed.

The Oakland County birds were in a colony like Bank Swallows, but in Wayne County they are strung along the clay banks about five pairs to a mile and sometimes only one pair to a whole township, while in many townships they do not occur at all. I have read somewhere that it is difficult to separate this species from the Bank Swallow while in flight, but this is contrary to my experience. If together the Bank looks smaller, but this can not be considered good identification. The flight of the two species, however, is entirely different, the Bank being sharp and cleaving and the Rough-winged more fluttering and bat alike; but at close range it requires no expert to separate the two species. The brown pectoral band of the Bank contrasts sharply against the white, while the underparts of the Rough-wing have a brownish white appearance without any contrasting color.

On the same day that the Rough-winged Swallow's eggs were taken I located a nest with five slightly incubated eggs of the Blue-gray Gnatcatcher on Section 22, Canton Township. The nest was about twenty-five feet above the ground in the upright fork of an elm sapling, and although the tree shook and bent beneath my weight madam clung to her treasure with head craned downward. I slowly reached up the other side of the nest, caught her tail between two fingers and jerked her into my hand, all her tail feathers coming out just as my fingers closed. When released she did not even leave the tree, but fluttered about uttering cries of protest. This reminds me of a probable case of heart failure. Many years ago I caught a robin

on her nest, and after a few seconds of struggle her body suddenly became limp. She was dead.

Detroit, Mich. J. CLAIRE WOOD.

The La Rue Holmes Nature Lovers' League, now numbering over three thousand young members, in schools, chiefly, had its origin in the life and conception of a young naturalist, who mourned with intense yearning love over passing nature, but who was called to a higher place of service when but upon the threshold of his contemplated work. Its executive officers are Mr. Waldron De Witt Miller, President; Miss L. Connolly, First Vice-President; Mr. F. N. Marcley, Second Vice-President; Capt. G. C. Musgrove, Treasurer and Recording Secretary; Mrs Benj. P. Holmes, Secretary; and a Board of twenty-six directors. The Treasurer's report shows receipts of $322.35 and expenditures amounting to $181.9, leaving a balance of $140.40. The following notes have been contributed by members:

Wild geese flew over this house on January 31. It was impossible to tell even the direction of flight, the fog being so intensely dense, their presence being made known by their *honk, honk*, as they passed by.— *G. K. Holmes, Summit, New Jersey.*

I saw two bluebirds flitting from tree to tree, on, or about January 28.—*S. Teeple, Morristown, New Jersey.*

Members of the Wilson Ornithological Club.

ACTIVE MEMBERS.

Abbott, Clinton G., 153 West 73d street, New York, N. Y.
Armstrong, E. E., 5219 Madison Ave., Chicago, Ill.
Baird, Robert L., Athens, Me.
Bales, Dr. B. R., Circleville, Ohio.
Barnes, Hon. R. M., Lacon, Marshall Co., Ill.
Barrows Prof. Walter B., East Lansing, Mich.
Bartsch, Prof. Paul, Smithsonian Inst., Washington, D. C.
Beers, Henry, 91 Denver Ave., Bridgeport, Conn.
Bent A. C., Taunton, Mass.
Bishop, Dr. Louis B., 356 Orange St., New Haven, Conn.
Blaine, Alex. W., M.D., 1105, Jefferson St., Detroit, Mich.
Bowles, J. H., 401 South G St., Tacoma, Wash.
Brewster, William, 145 Brattle St., Cambridge, Mass.
Brooks, Clarence M., Box 260, Keene, N. H.
Bruen, Frank, 218 Main St., Bristol, Conn.
Buck, H. R., 38 Pearl St., Hartford, Conn.
Burns, Frank L., Berwyn, Pa.
Chambers, W. Lee, Santa Monica, Calif.
Chase, Mrs. Agnes, 116 Florida Ave., N. W., Washington, D. C.
Coale, Henry K., Highland Park, Ill.
Coffin, Percival Brooks, 3232 Groveland Ave., Chicago, Ill.
Crosby, Maunsel S., Rhinebeck, N. Y.
Davenport, Mrs. Elizabeth, 45 Green St., Brattleboro, Vt.
Daggett, Frank S., 109 South Elmwood Ave., Oak Park, Ill.
Dawson, Rev. W. Leon, Seattle, Wash.
Dean, Walter, 29 Brewster St., Cambridge, Mass.
Dearborn, Dr. Ned, Field Museum, Jackson Park, Ill.
Durfee, Owen, Box 125, Fall River, Mass.
Dutcher, William, 525 Manhattan Ave., New York, N. Y.
Dwight, Dr. J. Jr., 134 West 71st St., Nw York, N. Y.
Ells, George P., Norwalk, Conn.
Embody, George C., 78 Seymour St., Auburn, N. Y.
Fisher, Miss E. W., 1502 Pine St., Philadelphia, Pa.
Fleming, James H., Toronto, Ontario.
Fordyce, George L., 40 Lincoln Ave., Youngstown, Ohio.

Gault, Benj. T., Glen Ellyre, Illinois.
Hall, F. H., Geneva, N. Y.
Henderson, Hon., Junius, Boulder, Boulder Co., Colo.
Henninger, Rev. Walter F., New Bremen, Ohio.
Hix, George E., 114 W. 90th St., New York, N. Y.
Hollister, Ned, Biological Survey, Washington, D. C.
Holmes, Mrs. Georgiana K., Summit, N. J.
Jacobs, J. Warren, Waynesburg, Pa.
Jones, Prof. Lynds, 160 N. Professor St., Oberlin, Ohio.
King, J. W., St. Clairsville, Ohio.
Leete, Miss Rebecca M., North East, Pa., Erie Co.
Leiblesperger, W. H., Fleetwood, Pa.
Maxfield, C. S., Hartford, Conn.
McConnell, Harry B., Cadiz, Ohio.
McKechnie, Frederick B., Ponkapog, Mass.
Metcalf, Zeno P., Dep't. of Agric., Raleigh, N. C.
Miller, Richard F., 3473 Amber St., Philadelphia, Pa.
Mitchell, Dr. Walton I., Barnes Bldg., Wichita, Kans.
Oberholser, Harry C., 1445 Girard St., N. W., Wahsington, D. C.
Pennock, C. J., Kennett Square, Pa.
Richards, Chas. C., 269 Broadway, Taunton, Conn.
Rogers, Charles H., 109 Patton Hall., Princeton, N. J.
Sage, John H., Portland, Conn.
Saunders, William E., 352 Clarence St., London, Ont.
Schantz, Orpheus M., Morton Park, Ill.
Sellick, George H., 110 High St., Exeter, N. H.
Shearer, Dr. A. R., Mont Belview, Chambers Co., Texas.
Showalter, Ben. R., Oberlin, Ohio.
Skinner, H. H., City Hospital, Seattle, Wash.
Sloanaker, J. L., Grinnell, Iowa.
Smith, Jesse Lowe, Highland Park, Ill.
Sparks, Miss Marion E., Urbana, Ill.
Spaulding, Fred B., Lancaster, N. H.
Staat, W. C., Grinnell, Iowa.
Stone, Clarence F., Branchport, N Y.
Swales, Bradshaw H., Grosse Ile, Mich.
Taverner, P. A., 55 Elmhurst Ave., Highland Park, Mich.
Thayer, Hon. John E., Box 98 Lancaster, Mass.

Tinker, A. D., 342 S. State St., Ann Arbor, Mich.

Walker, J. S., M.D., Carnegie, Pa.

Wallace, James S., 69 Front St., Toronto, Ont.

Webb, Walter F., First National Nurs., Rochester, N. Y.

Wilde, Mark L. C., 311 N. 5th St., Camden, N. J.

Wilson, Burtis H., 1102 Seventeenth St., Rock Island, Ill.

Wilson, Sidney S., German Ave., Bank Bldg., St. Joseph, Mo.

Wood, J. Claire, 179 17th St., Detroit, Mich.

Wood, Norman A., 1216 S. University Ave., Ann Arbor, Mich.

Wood, Rev. S. F., 14280 Superior Ave., Cleveland, Ohio.

ASSOCIATE MEMBERS.

Bowditch, Harold, "Sunnyside," Jamaica Plain, Mass.

Carriger, H. W., 486 Eddy St., San Francisco, Cal.

Case, C. M., 7 Holcomb St., Hartford, Conn.

Field, Irving A., Westminster, Md.

Hathaway, Harry S., Box 1466, Providence, R. I.

Heilmann, Karl J., 411 East Market St., Tiffin, Ohio.

Keim, Dr. Thomas D., 405 Redcliffe St., Bristol, Pa.

Kuenning, Gustav A., First City Bank, New Bremen, Ohio.

Metcalf, Plimpton, Ohio.

Richardson, Dr. G. F., Mt. Pleasant, Mich.

Schantz, Mrs. O. M., Morton Park, Ill.

Shankland, F. N., Willoughby, Ohio.

Van Wagner, Millard, 47 Leonard St., New York, N. Y.

Vetter, Dr. Charles, 152 Leonard St., New York, N. Y.

Warren, Edward R., 20 West Caramillo St., Colorado Springs, Colo.

Wheatley, Miss Clara S., Medina, Ohio.

OCT 2 1 19

Fig. 6.—Looking northwest along the path from the rear of the Breakers Hotel. The vegetation is transitional into Pinus-Juniperus Forest Formation. Note old cottonwoods, young pines, junipers, and oaks, and numerous lianas; also conspicuous tertiary layer. Near here the Woodcock is believed to nest, also probably Green Heron. This is typically a woodland song bird retreat.